



# VELUX EDITORIAL

## [URBAN] LIFE

Our health is the most precious thing we have — and essential to living a good life. The key benefit of a building is thus to contribute to human health and well-being — and cities can provide these benefits on a large scale. In practice, this important factor is neglected, but sustainable living is no longer a futuristic dream; Buildings and entire cities have the potential to give more to the environment than they take, and at the same time enrich and promote the health and comfort of their inhabitants.

In this issue of D/A, we discuss what qualities cities need to become healthy and liveable, and how citizens can contribute to this sustainable urban transformation. We thereby continue the exploration of urban life started in the previous issue. This time we focus on the changing desires, values and mindsets of urban dwellers and on their notions of quality of life. The two issues thus complement each other – one elaborating on the objective aspects and the other on the subjective aspects of the theme of urban life.

Making cities more liveable is about balancing the needs of the individual citizen and the collective needs of society. If we establish links between different communities and stakeholder groups, businessmen could see cities through the eyes of ecologists, planners would become acquainted with the thinking of sociologists, city administrations might base their processes on the participation of all citizens, and our collective decisions would reflect the desires and needs of future generations.

There is a huge potential in – and requirement for – this kind of co-creation. At the same time, this approach constitutes a radical departure from current practices in planning and urban development that are often constrained by silo thinking. Numerous bar-

riers still exist, mainly in our thinking and behaviour.

With D/A 18, we would like to build bridges between people, and (re-)connect organisations and areas of know-how. In the first part of this issue, called PLACES, we take a closer look at three cities and how they are trying to address issues of urban development. We return to the three cities that we portrayed in D/A 17 - London, Phoenix and Rio de Janeiro. You will be able to see the cities, and the life in their streets, parks and buildings, through the eyes and the camera lens of artist Robert Polidori. The images were created from the same panorama photographs shown in D/A 17, but this time zooming in even deeper, to the scale and the living environment of the individual citizen. In addition, we have asked architects, planners, politicians, researchers, homeowners and urban activists from London, Phoenix and Rio de Janeiro to describe the situation in their home cities.

The second part, entitled CHANGE-MAKERS, shows the transformation that becomes possible once small and large cities from different parts of the world start to collaborate, exchange knowledge and opinions, and undertake research efforts for a better future. To explore this potential, we publish four conversations with representatives from international organisations – the World Health Organizations' Healthy Cities Network, the International Architects' Union, the Clinton Foundation/C40 Cities, and Sustainia – on how they help cities to become healthier, more resilient and more sustainable places to live.

Together, D/A 17 and 18 present the framework conditions under which sustainable urban transformation can happen, from the very large scale to the individual

#### VELUX EDITORIAL

home, and within which architects, planners, building owners, construction companies and businesses like the VELUX Group operate. There is no need to wait for this transformation – in fact, there are many signs showing it has already started. The inspiration for active, sustainable living in cities and buildings is abundant, and growing day by day. Examples can be found in the numerous buildings that are being built or re-modelled according to the Active House principles. These buildings with plenty of daylight and fresh air, which benefit both

people and the environment, can be built today, using materials, building components and technologies that are readily available. At the VELUX Group, we seek to contribute to such buildings through our products and through our collaboration with architects, engineers and planners, to allow them to become the building blocks for future liveable cities.

Enjoy the read!

The VELUX Group

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## PLACES

## LONDON PHOENIX RIO DE JANEIRO

Cities now serve as living space and home for more than half of all mankind. But what is it really like to live in a large city? What challenges are urban dwellers facing today in order to ensure a healthy life tomorrow? What is the ongoing relationship of cities with their natural environment? What kind of dynamic drives urban communities forwards, and what fascination do cities exert on their citizens? According to what rules do they continuously transform themselves? Guided by these questions, D/A 18 explores life in three cities with a photographic essay, showing crops of panoramic photographs of London, Phoenix and Rio de Janeiro taken by artist Robert Polidori in the spring of 2012.

The photo essay is accompanied by a selection of statements on the three cities. Mayors and citizens, architects and their clients, economists and health experts, scientists and political activists from London, Phoenix and Rio all provide their viewpoints. Their statements illustrate that every city evolves out of its own traditions and social conventions, the surrounding climate and the resources it has access to – but also that every city is the result of countless individual initiatives and ideals that have been put into practice. And yet certain challenges recur in many different cities – from accommodating rapid urban expansion to ensuring the health and well-being of all citizens, regardless of income, age or social status. Similarly, the hopes and aspirations of citizens all over the world also resemble each other: they are all concerned about health and justice, clean water and fresh air, a vital urban society and quality of life for current as well as future generations.

These shared concerns and values are vital to achieving the spirit of co-creation we need in order to sustainably transform the world's cities. If the transformation that we all long for can rely on the intrinsic motivation and deeply-felt convictions of as many citizens as possible, it stands a good chance of being successful.

To read the statements in full length, please go to: da.velux.com

### ROBERT POLIDORI

### ZOOMING PANORAMAS

The city panoramas in this issue of D/A were created by the artist Robert Polidori. They consist of up to 22 single photographs taken with a large-format camera. The photographs were stitched together to form a wide panorama on which we zoom in to highlight the everyday human life inside the three cities.















To read the statements in full length, please go to: www.VELUX.com/da "The Government is trying to increase the emphasis on private renting, which is expected to result in significantly larger densities of occupation. Regeneration is also aiming at much higher densities ... Buildings that went up in the 1960s often used land very inefficiently and although new proposals are better thought out, managing qualitative improvement in housing remains challenging. There is also the challenge of scale, the need to build in enormous quantities, which is not easy."

Professor Christine Whitehead – Housing Economist at the London School of Economics

"The beautiful old houses and majestic blocks of flats in the centre [of London] are often heritage listed. For these dwellings, architects handle renovations. Outside the centre, there will hardly be a home where the owner has not undertaken a little, or a lot of, Do-It-Yourself renovation. Most DIY is about improving the property ready to sell for a higher price. Home improvements in London are about enhancing your asset, not making a better place to live."

Christopher C. Hill - architect

"In private and social renting, 224,000 London households (2 %) are overcrowded. Historically, this was a problem in the private sector but it has doubled in social housing in recent years. Overcrowding causes illness and affects child development. Families' health and safety are also affected by the physical condition of their homes, and low incomes, limited access to good food shops, services, transport and leisure facilities compound deprivation. Mapping studies show that deprived households are concentrated on London's notorious social housing estates and in private rented housing."

Julia Atkins – Director of the London Research Centre and Senior Research Fellow at London Metropolitan University "Housing providers in London face some serious challenges. Housing waiting lists are growing, more people are living in overcrowded conditions, and house prices and monthly rents are rising rapidly. One of the biggest challenges is building enough homes to ensure that all Londoners have a good place to live. In the social housing sector alone, London needs more than 32,000 homes to cope with an expected population increase of just over one million people over the next 20 years. Given that space in the capital is finite, we need to look to high quality, higher-density housing that is affordable for all Londoners, including those on low to middle incomes."

June Barnes – urban planner and Group Chief Executive at the East Thames Housing Group "London is a totally divided city. There are pockets of affluence and, often just a stone's throw away, enclaves which can only be described as containing third world conditions. At times it is shocking how different the city can be. I was told by a housing officer about a house in the borough of Newham that, from the outside, appeared to be a perfectly normal two-up, two-down terraced house; inside, thirty-eight people were living there. And a person who works for the 'Shelter' charity told me of someone who was even being charged rent for living in a commercial fridge!"

Anna Minton – writer, journalist and author of *Ground Control:* Fear and Happiness in the Twenty-First Century City

"The New Labour Government, which was in power in the UK from 1997 to 2010, created a powerful bureaucratic cadre for urban design in the country, adding layers of regulatory guidelines that did some extremely good things ... But the new guidelines also added to the already burdensome bureaucracy, while design reviews had a tendency to the wilful and corruptible.

At our practice, HTA, we are investigating how removing much of the regulation could help communities, or customers and consumers, make their own decisions about the kind of housing and buildings they really want. A greatly streamlined set of standards would focus on legitimate areas such as sustainability and health."

Ben Derbyshire – architect, partner at HTA Architects

"There is vast variety of homes and neighbourhoods in London of very different quality. There are wealthy districts, such as Hampstead and Highgate in the north, Kensington and Chelsea in the west, Blackheath in the south, and a number of pockets in outer boroughs. Then there are the seemingly endless suburban terraces built in the late 19th and early 20th centuries that generally make for satisfactory individual dwellings but few great neighbourhoods. And lastly, there are large areas of suburban semidetached homes; and there are some really dysfunctional places, mostly built in the second half of the 20th century, with spatial problems and economic deprivation reinforcing each other. Very few are truly environmentally functional or sustainable. But there is nowhere that can't be improved, made more sustainable and more convivial."

Sunand Prasad – architect, partner at PenoyrePrasad and former RIBA president (2007-2009) "Housing in London is in perpetual crisis. There are too few places to live and renting or buying is expensive. Most of the existing stock is badly insulated, has terrible plumbing, is draughty, and not very sustainable. Yet wealthy Greek, Spanish, Italian, Russian, Middle Eastern and lately French are rushing to buy here. In unstable economic or political times, London is a place to park money. This is nothing new. London has had many waves of immigrants that have invested in its housing in a continuous cycle of investment."

Christopher C. Hill - architect

"We don't yet have healthy cities in Britain, with exemplary walking and cycle routes and a green infrastructure connected to the life styles of people. Much of London is abundant in parks and it would not take much to create a London-wide green grid. [But] we haven't got there yet. There is also considerable deprivation in London. And unhealthy places – in terms of pollution, air quality, personal safety – are where the poorest people live. There is a strong class dimension to the spatial geography of the city, and any improvement plan needs to take that head on."

Sunand Prasad – architect, partner at PenoyrePrasad and former RIBA president (2007-2009)

"Increasing housing investment is going to be very difficult over the next years, and the honest answer is that there is no way the capital can produce sufficient housing. We are not going to get large increases untilwefree up the mortgage market. Nobodywants to build much at the moment, given the level of uncertainty involved. Hopefully, some of the [recent] initiatives will start to build confidence and there will be a return to significant house building. But supply is always going to be outmatched by the large numbers of people who, by the nature of a world city like London, want to live here. It's not a soluble problem."

Professor Christine Whitehead – Housing Economist at the London School of Economics

"Over the next twenty years, London's population is expected to grow by around one million people. The lack of housing will be exacerbated by this growth and the backlog of households needing housing now ... Resources are limited and there are competing priorities, but some joined-up thinking about investment could achieve multiple objectives. Why not combine investment in new homes with funding for skills training and proper apprenticeships for young people in deprived areas? ... Why not create sustainable communities by using small sites within existing private housing areas for affordable homes for rent in the same way that land on estates is beingused for homes for sale? And why not intensify efforts to attract pension fund investment in an improved private rental sector with lower rents for longer-term security?

Investment in London's housing is vital for its world city status."

Julia Atkins – Director of the London Research Centre and Senior Research Fellow at London Metropolitan University "Our experience tells us that successful high-density living is about much more than just the homes. It's also about ensuring there are jobs in the area, good transport links, local facilities and a sense of community. For many residents looking for a new home, the quality of the area is a key driver. We apply the Five-Minute test to all our new housing developments. Inotherwords, can you buy a pint of milk, get to the bus stop or take your child to the park in just five minutes? Local facilities and services are crucial to the way residents feel about their area. We are a firm believer in master planning to ensure newhomes are accompanied by the right ingredients to create a great place to live. Establishing a vision for an area that covers buildings, spaces, movement and land leads to a more successful development."

June Barnes – urban planner and Group Chief Executive at the East Thames Housing Group

LONDON STATEMENTS 11

"[A] key issue is the provision of affordable housing in London. The average age of first-time buyers has been creeping up in recent years. Supply is the problem, so we need to create homes to let. This needs to be understood politically, as a social good. ... London needs a more diverse housing market in which consumers move more freely than at present between a wider range of solutions than is currently available. ... What is needed is a great diversity of size, style, brand, cost and tenure – constrained only by a minimal structure of regulation that ensures safety and sustainability and does not detract with excessive cost and needless constraint."

Ben Derbyshire – architect, partner at HTA Architects

"In contrast to the situation in the Nordic countries, when housing is discussed
in Britain it's really about property for
sale. Furthermore, compared to other
countries, this property development
approach to housing has led to the design of some of the smallest room sizes
in Europe, in order to maximise profits.
... Things need to change. This 'for profit'
development speculation is from a failed
economic model that has brought about
the recession of the last four years, which,
in turn, was premised on building on
higher and higher levels of debt."

Anna Minton – writer, journalist and author of Ground Control: Fear and Happiness in the Twenty-First Century City "London is an expensive city compared to most world cities, although compared to its immediate peers or competitors, such as New York, Paris or Tokyo, it is not so out of line. At the lower end of the housing system, nearly a quarter of London's housing stock is provided by non-profit suppliers (housing associations and local authorities) where rents may be as little as half the market rent, for those who can get access.

Within this sector, rents are still not far short of 50% of income for tenants – but two thirds of these receive incomerelated benefits to help pay the rent. A further 25% plus of Londoners live in the private rented sector, where market rents are very much higher. Tenants on lower incomes are eligible for housing benefit but, for the majority, rents are clearly high compared to other parts of the country."

Professor Christine Whitehead – Housing Economist at the London School of Economics "We urgently need to improve transport – public transport as well as walking and cycling routes. The imperative of low-energy retrofit of homes presents a great opportunity to catalyse a bigger programme of neighbourhood improvements. The biggest present-day problem is effectively making city-wide urban change, and the biggest potential for achieving it lies in transferring greater powers to the local level from the centre."

Sunand Prasad – architect, partner at PenoyrePrasad and former RIBA president (2007–2009)

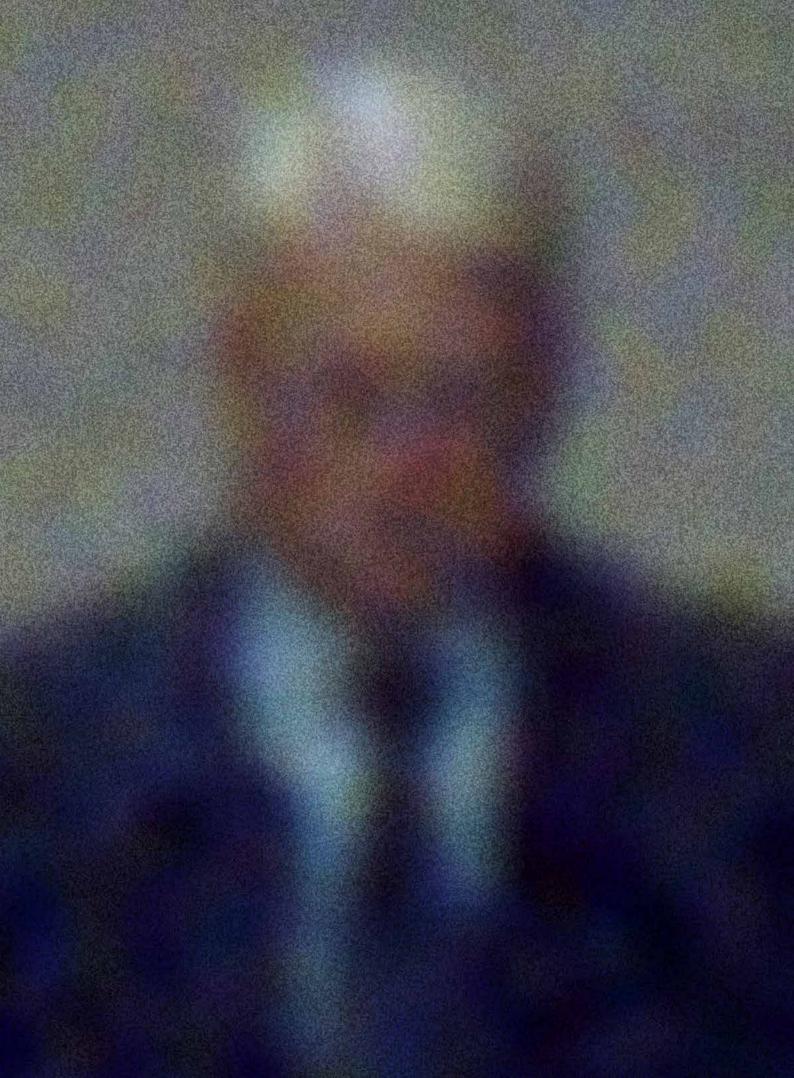




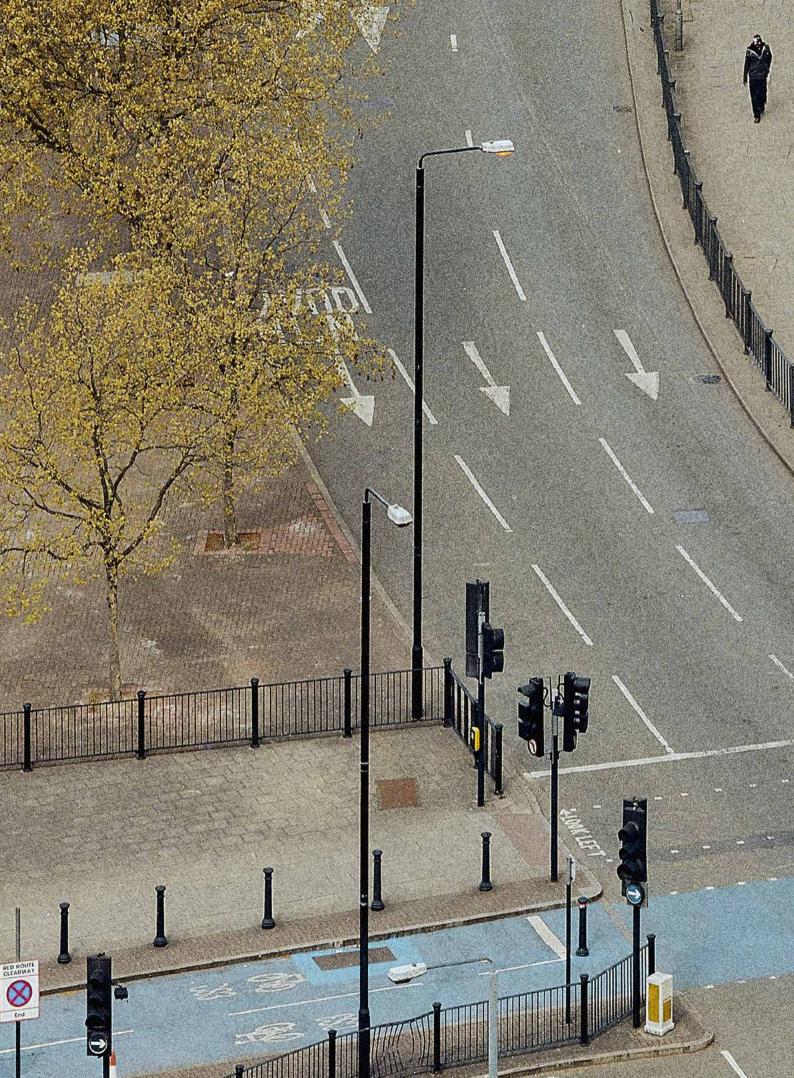




























To read the statements in full length, please go to www.VELUX.com/da

"Phoenix has for far too long been dependent on growth and development for its own sake, creating an economy dependent on builders, constructing homes for people who design and build homes for other people. With greater diversity in the economy comes greater resilience. There are already troubling signs that homebuilders and land developers are itching to get back into the fray and do virtually the same things they have been doing for the past 40-plus years – which will make us just as vulnerable, or more so, to the next economic calamity."

Mick Dalrymple – ASU Energize Phoenix Project Manager at the Global Institute of Sustainability at Arizona State University

"Critical to sustainable urbanism will be a tax structure that taxes land at a high rate and buildings at a much lower rate. This will result in a shift from quantitative to more qualitative growth. In the urban core, vacant long-held investment parcels deserve particular scrutiny as they signal blight, stagnation and urban failure. Investors and developers often buy these parcels and apply for building entitlements based on ambition rather than reality. ... Taxing the entitlement, realised or unrealised, would move these empty parcels to market and contribute to density."

Will Bruder – architect, principal of Will Bruder Architects

"For decades, Phoenix grew by building air-conditioned replicas of buildings and housing that existed somewhere else and were capable of providing for human comfort in completely different climates.... Today, the costs of cooling dwellings and other buildings in the Phoenix area are far greater than ever before.... With fewer resources available to pay utility bills, the thermostats are set higher, creating uncomfortably warm to hot internal environments. Rooms at such temperatures, and with little if any air movement, can easily disturb normal - and very necessary - sleep patterns, as clinical studies ... have shown."

Phil Allsopp – architect, urban health expert and member of the Sustainability Advisory Committee to the Mayor of Phoenix "Water is the critical issue of our region. While some would say that our reliance on a 336-mile canal to deliver our water is a thing to marvel, for many of us, it is a fragile life-line that ties our existence to outside resources ... and a reliance on high-energy, high-carbon inputs to push it uphill to Phoenix and beyond. There are numerous studies ... undertaken since the 1970s that look at water shortages globally and many of them have placed Phoenix and the desert south-west in the bulls-eye of places to watch ... With these looming conditions getting closer to reality, conservation should be our approach but Phoenix is one of the only cities in the State that doesn't offer water reduction incentives."

Jeff Frost – architect, Sustainable Project Manager at SmithGroupJJR

PHOENIX STATEMENTS 29

"A major challenge of the city has been, and will continue to be, the "build it and they will come" mentality, which has led to massive amounts of urban sprawl without a clear plan for maintaining this sort of development and lifestyle – especially with precious commodities like water and energy. Being a few years into the greatest recession seen in my lifetime, I believe we are seeing a shift in what people want, where they want to live, and how they want to commute to work.

The benefits of smart growth and 'new urbanism' are plentiful, and will help create a healthier society on the human level, as well as reduce our greenhouse gas emissions from driving cars for a healthier planet."

Stacey Champion – PR and environmental consultant

"When I wonder why we are different in Phoenix, I think it's because we have this kind of Wild West spirit that's still alive. By this I mean that there is a sense that we can be what we want to be and create something unique for ourselves that resonates with this place in which we live. Also there isn't the "good 'ol boy" network of establishment that exists in many other parts of the US. You can encounter people like the Mayor or other high-ranking officials in coffee shops and talk with them in a way that would be impossible in other places."

Serena Unrein – Public Interest Advocate for the Arizona Public Interest Research Group (Arizona PIRG) "The two game-changing events of the past 50 years that made the Phoenix of today and the Phoenix of the future possible are air conditioning and light rail. While air conditioning is a double-edged sword with serious energy consequences, light rail is a massive and incredibly important initiative that is transforming Phoenix, making it far more habitable and offering more choices for getting from A to B, especially for those who don't want to spend their waking hours behind the wheel of a car stuck in traffic."

Jonce Walker – urban planner and Sustainability Manager for Maricopa County

"Sustainably-oriented design and building provides not only economic benefit, ... it also helps us create the sense of community that we all enjoy and seek. Indeed, this type of thinking shouldn't be confined to those who can 'pay to play'. Rather, smarter design and technology should be available to everyone, regardless of means. I believe that great habitable space is as much a fundamental social justice issue, as it is a sophisticated design challenge.

The Phoenix region is projected to grow to over 7 million people by the year 2050. It is incumbent upon us now to prepare the fertile ground upon which future successes may grow and blossom. This will require numerous approaches, ranging from high-tech to historically-minded, that add value to our community, economy, and environment."

Gregory Stanton - Mayor of Phoenix

"The Phoenix metropolitan region is like a semi-finished canvas waiting to be filled in and completed. It's a place that is full of opportunities – and also a place where the problems of decades of planning, designing and building for the convenience of the automobile and cheap energy are in full view. ... Much of what we need to do in our region to make it more habitable, appealing, sustainable, prosperous and healthy will have to evolve over decades – because there are no quick fixes."

Phil Allsopp – architect, urban health expert and member of the Sustainability Advisory Committee to the Mayor of Phoenix

"Climate change is real and we WILL deal withit – either in a prepared, logical manner or in a reactive, behind-the-eight-ball manner riddled with loss, insurance company failures and massive government spending. We missed our opportunity to head it off but we still have time to prepare the first aid kit to treat and mitigate the coming wounds.

Whereas some regions are subject to extreme weather events and rising sea levels, at least we are likely to face more of what we know - extreme heat and dryness. Taking aportfolio of actions now will increase our resilience and liveability in what lies ahead."

Mick Dalrymple – ASU Energize Phoenix Project Manager at the Global Institute of Sustainability at Arizona State University "Many US cities came about before the automobile, but Phoenix has seen much of its existence centred on the car and its wide streets are a tribute to that early relationship. Today Phoenix is largely a network of car-oriented thorough fares that, during the days and especially during the summers, are hostile to pedestrians. We have spent a lot of time, money and energy on trying to make life easier for the automobile but have largely ignored what it takes to actually achieve comfortable outdoor conditions."

Jeff Frost – architect, Sustainable Project Manager at SmithGroupJJR "Phoenix is changing from a place that is associated with uncontrolled growth to a place that is demonstrating dense and sustainable city-making strategies within the context of the fabled and fragile Sonoran desert.... The hour-plus drive from home to work is increasingly understood to be a time and resource thief, one that even more freeways and artificially cheap gas cannot support indefinitely. We are asking new questions about our building forms and systems and we are less ready to accept off the shelf approaches that worked elsewhere but have little to do with our particular conditions."

Will Bruder – architect, principal of Will Bruder Architects

PHOENIX STATEMENTS 31

'There are some glaring missed opportunities especially in our downtown areas. Some buildings present blank walls to the streets making them very inhospitable to pedestrians. It's crazy that we have buildings designed in a way that forces pedestrians to walk around three sides of a building just to find the entrance. And in our summers, this can be very annoying indeed. In fact, if you are elderly or disabled in some way, it can be downright dangerous."

Serena Unrein – Public Interest Advocate for the Arizona Public Interest Research Group (Arizona PIRG)

"In many ways, I hope that the real-estate boom times don't return. Developers and 'home builders' may want to continue doing what they did before when the economy comes back but I don't think too many people will be rushing to buy especially as many of these subdivisions are miles and miles from any amenities of any kind. ... There are 70,000 vacant properties in the Phoenix metro region today, so for builders and developers to build more of the same would not seem to make good business sense."

Jonce Walker – urban planner and Sustainability Manager for Maricopa County "I flew into Phoenix last night and ... the view from the plane highlighted how inefficiently we use land - because it has been historically cheap. Urban density can make a huge positive impact on resilience by reducing our need for imported transport fuels and for parking lots and decreasing our consumption of virgin desert eco-systems. I'm not suggesting we copy Chicago or other cities. We need to be careful and deliberate about achieving urban density that works for the context of the hot desert climate we live in to reduce urban heat island, rather than increase it, and get us off of our need for automobiles just to buy some groceries."

Mick Dalrymple – ASU Energize Phoenix Project Manager at the Global Institute of Sustainability at Arizona State University "I find Phoenix to be an excellent place to launch and execute innovative projects and ideas. Community action is strong and there is great momentum here. I'd like to see Phoenix city leaders become more progressive and forward-thinking, startbuilding with as much thought given to residents as tourists, continue to shape our urban core, focus on smart growth that can include all socio-economic levels and create meaningful sustainability and climate change adaptation plans ..."

Stacey Champion – PR and environmental consultant









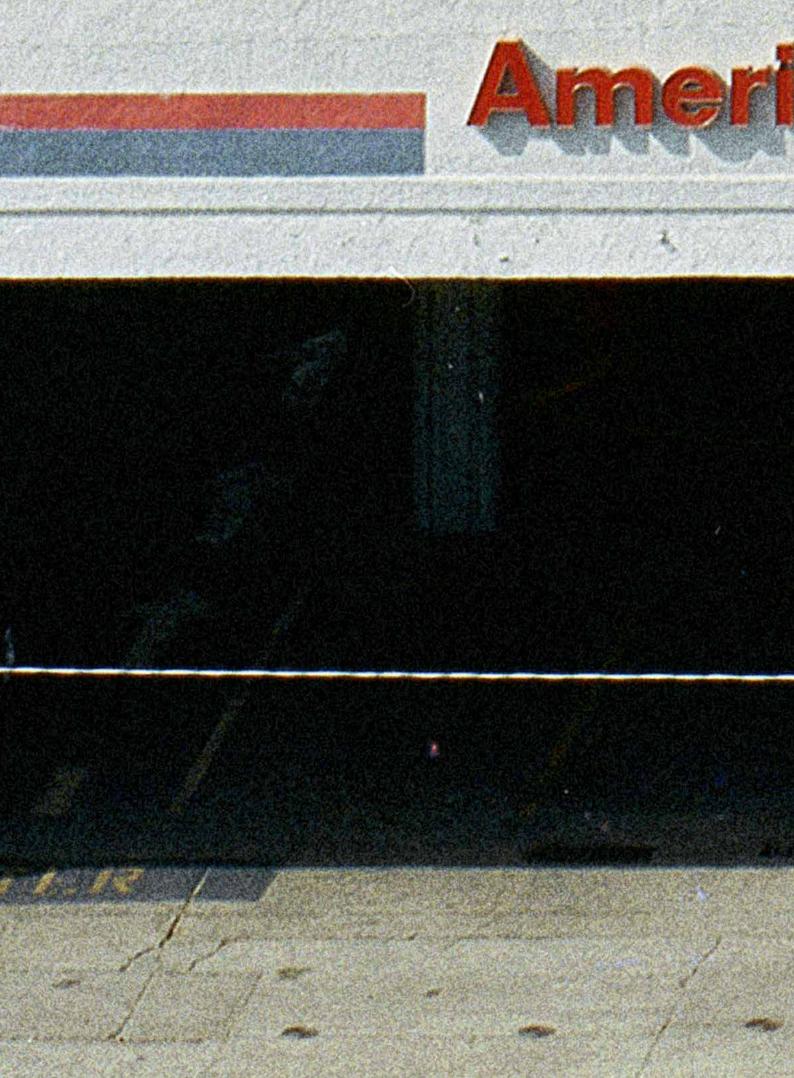












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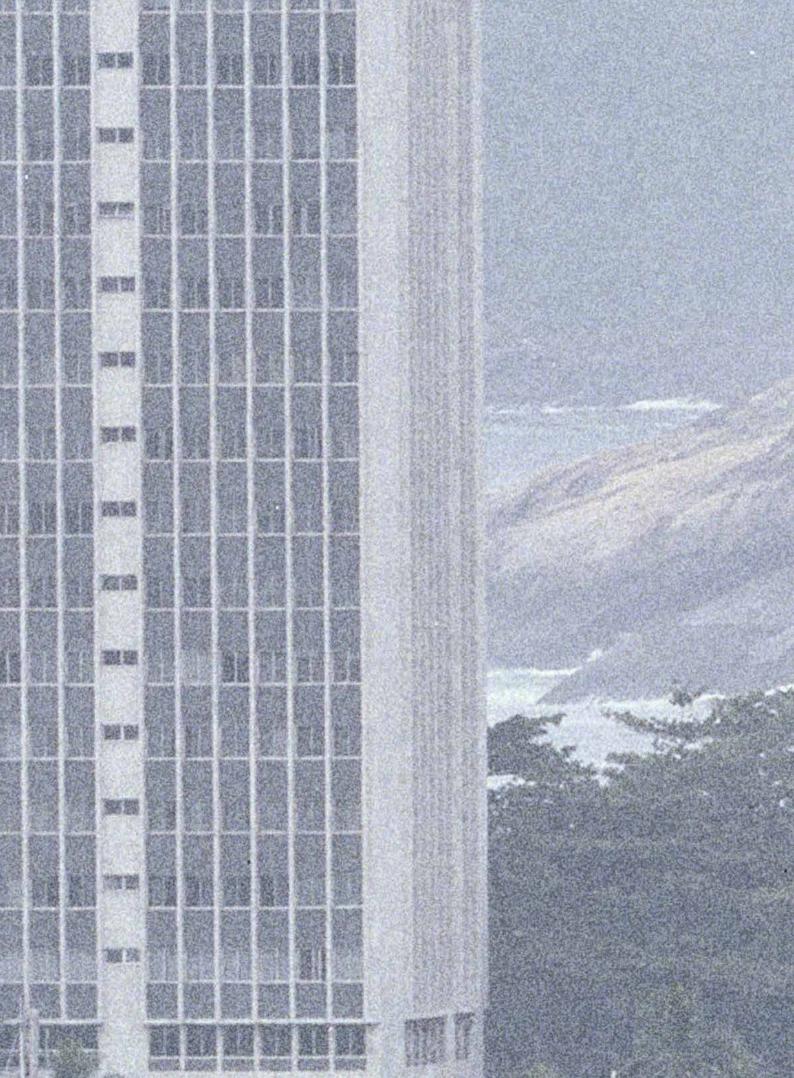
# PLACES RIO DE JANEIRO

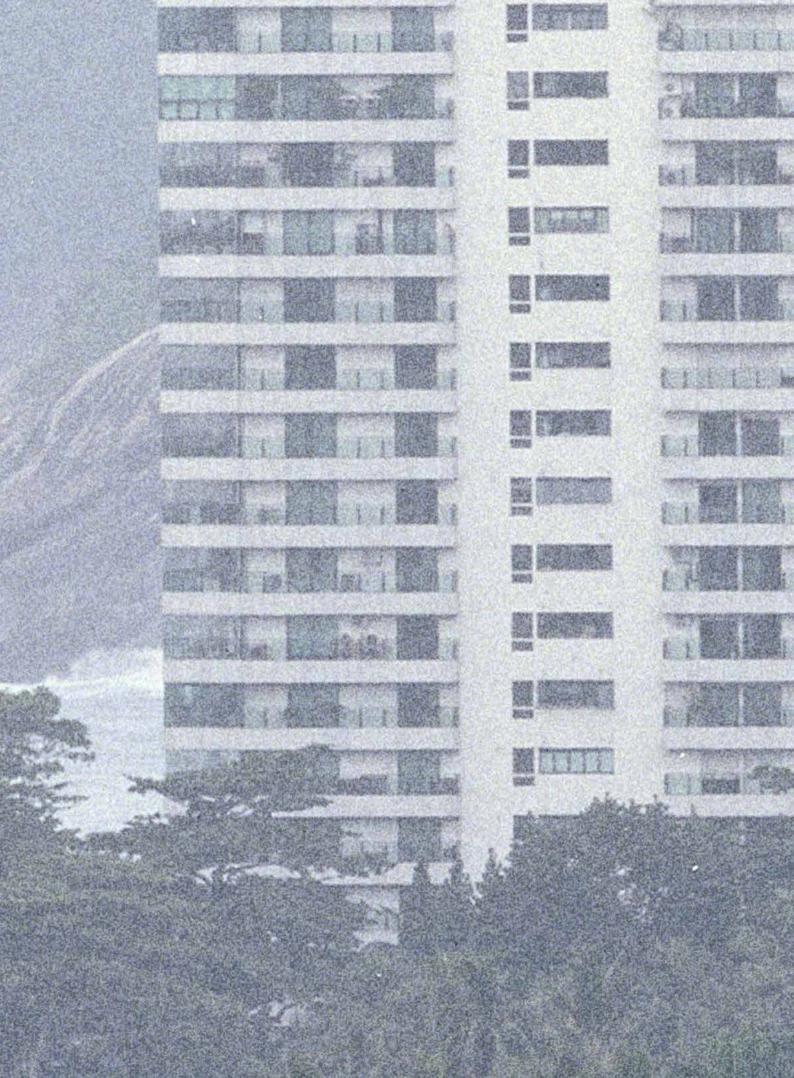














To read the statements in full length, please go to: www.VELUX.com/da "Providing public services in poor areas is a question that is not sufficiently understood but that is vital to democracy. I am very sceptical about public services, even if the mayor, governor or the president decrees that they must be provided. ...

The city is spread out and not very dense, and demands resources we don't have. If we don't have full resources to guarantee well-distributed services, there will be greater political pressure from those with more money or influence, and the city will focus on solving this problem and leave the rest even more abandoned."

Sérgio Magalhães — urban planner, architect and president of the Rio de Janeiro chapter of the Institute of Brazilian Architects (IAB)

"Since 2007, Rio's state and city governments have at last focused on the territorial integration of informal and formal areas of the city, increasing public safety and the provision of city services. ... But in practice, rather than integrating these areas, Rio de Janeiro is doing just the opposite, triggering an increase over the past 18 months in the city's already pernicious inequality. Increased security is placing new demands and pushing up rents. At the same time, utilities such as electricity, water and cable television are beginning to charge for services that were previously either free or low-cost, increasing residents' monthly expenditure."

Theresa Williamson – city planner and founder of Catalytic Communities, an organisation that provides provides media and networking support to favela communities

"Rio is in a state of flux. Upcoming major events have led to a boom in the residential housing market, accelerating a westward expansion into territories with limited infrastructure. Meanwhile, important initiatives by city and state governments to improve the quality of living in the city are underway. On balance, Rio is becoming a better place to live, with enhancements to city-wide mobility through improved transport systems, and investments in older sections of the city – as in the case of Rio's port – to revive their centrality for residences, offices and services."

Claudio Frischtak – economist and head of Rio-based consultancy Inter.B Consultoria Internacional de Negócios; Benjamin R. Mandel - economist at the Federal Reserve Bank of New York "In the last decade, Rio de Janeiro's car fleet has increased by almost a third. This pace, far higher than the population growth of around 7 % during the same period, remains unabated. By 2020, the number of cars is expected to double. It certainly shows: Rio has never been as loud, polluted, and congested. The city has probably also never been as unaffordable. Few discuss transport alternatives, but complaints about rising real estate and rental prices have become a staple of everyday life."

Bruno Carvalho – Assistant Professor in Luso-Brazilian studies at Princeton University "[I]t's necessary to invest in basic infrastructure. The deficit here affects not only favelas, although they're the most needy in this regard, but also the homes of the formal city. Due to a lack of investment and to urban sprawl, no less than 70% of greater Rio de Janeiro's twelve million population have inadequate sanitation. In a city that wants to be world-renowned as green, the homework hasn't been done. ... Massive investment in sanitation is fundamental to changing the situation but, at the current rate, universal basic sanitation will be not be available in Brazil until 2070."

Renato Cosentino – Master's student in Urban Policy and Planning at the Rio de Janeiro Federal University and press adviser for the Global Justice human rights group

"According to the 2010 Census, Rio de Janeiro had 763 slums, which housed some 20% of the population of the city. ... Most favelas in Rio de Janeiro have masonry buildings and many already have, in a precarious way, water networks, sewers and street lighting. But these are not installed in an effective way that meets the basic needs of residents. ... The dwellings are generally poorly lit and ventilated, not very functional and lacking in safety."

Daniela Engel Aduan Javoski – architect, founder of Arquitraço Architects

"Brazil is undergoing very positive economic development at the moment, with large gains in income even among the poorer parts of society. Yet people tend to invest this extra income much more in the amenities of everyday life inside the house rather than into upgrading the house itself. Even in the favelas you will find houses that, although definitely not good or safe in terms of construction, have the full range of domestic equipment like freezer, air-conditioning, DVD, satellite TV, personal computer and so on."

José Marcelo Zacchi – Research Associate at Instituto de Estudos do Trabalho e Sociedade (IETS) in Rio de Janeiro

"[U]rban intervention in a context of growing investment must include life quality improvements, preventing the reproduction of social exclusion in new packaging. For this to occur, the process must include society's effective participation in decision-making and the allocation of public resources. This is not taking place in Rio, though the law requires it. A sense of urgency regarding urban development has reduced community participation, and economic growth hasn't been accompanied by a guarantee of rights for the population as a whole."

Renato Cosentino – Master's student in Urban Policy and Planning at the Rio de Janeiro Federal University and press adviser for the Global Justice human rights group "With a significantly lower crime rate, many of us are discovering our own city and can appreciate its unique juxtaposition of nature and urban life. ... As many favelas and nearby neighbourhoods have become safer, the city has become more integrated, more accessible.

When I move around Rio de Janeiro these days, it feels like I'm in one of those dreams where the location is familiar, yet strange. No longer must we stay safe in our comfort zones, or move away and build a new downtown. Now, the city is expanding – not westward, north or south – but in our mental map of it."

Julia Michaels - journalist and founder of the RioRealBlog (www.riorealblog.com)

"Rio earned its moniker as the Cidade Maravilhosa – the Wonderful City – not just because of its exuberant nature, as commonly thought today. The expression, coined in the early 20 th century, also referred to the results of an ambitious set of urban reforms inspired by Haussmann's in Paris. For much of the century, spatially segregating the city remained a central aim of Rio de Janeiro's urbanism. The city was considered 'wonderful' when the poor were not around."

Bruno Carvalho – Assistant Professor in Luso-Brazilian studies at Princeton University "Favela-upgrading programmes should not be limited to urban infrastructure, but also include interventions in the houses themselves. Installing windows that can be opened, waterproofing floor slabs and walls, the replacement of electrical wiring, as well as sanitary improvements and structural checks are essential to the good quality of buildings. The participation of residents in the definition and implementation of these interventions is critical to project success."

Daniela Engel Aduan Javoski – architect, founder of Arquitraço Architects

"Rio de Janeiro is like a brand, directly associated with sustainability in billions of people's minds. We have three large rainforests, two bays, a long seacoast and enormous lagoons. We enjoy a unique combination of natural and man-made environments. Maybe this is why people all around the world have heard of the neighbourhood called Copacabana. How many people can name a neighbourhood in Stockholm? This is not the Caribbean or the Indian Ocean, however.... The city represents the planet's own most important challenges. Can we clean up Guanabara Bay, institute a full-blown recycling program, and prepare for the rising seas of global warming?"

Sérgio Besserman Vianna – economist and President of the Rio de Janeiro Municipal Committee for Sustainable Development "Rio finds itself on the eve of many revolutions ... It's a city moving in the direction of sustainable development, a place of paradox and challenge.

The United Nations' Rio + 20 Conference for Sustainable Development raised consciousness among residents about the environment and their city. We were bombarded intellectually and emotionally.

Just after the conference, UNESCO declared Rio de Janeiro's natural landscapes a World Heritage Site. More than ever, we are a city that must work to consolidate itself as a brand, and this means we must perform well."

Sérgio Besserman Vianna – economist and President of the Rio de Janeiro Municipal Committee for Sustainable Development

"What has led to the city's abysmal inequality is a deeply-rooted prejudice against favelas, resulting in a lack of public sector investment in integrating these communities with the formal city. What we are seeing today is simply the continuation of this tradition. Only now is the public sector investing: but not in these communities. Government is investing in these territories only to prime them for property speculation. The residents who occupied them will once again be on their own."

Theresa Williamson – city planner and founder of Catalytic Communities, an organisation that provides media and networking support to favela communities

"For the first time in decades, concerted, coordinated actions at all levels of government are directed at removing the stigma (and violence) that have characterised the favelas, where youth unemployment still stands at around 20% ... These actions involve community development and job creation efforts, improvements in city services (such as regular garbage collection), and novel infrastructure and equipment to reduce spatial segregation. The use of elevators and gondolas (as in Medellin) has facilitated integration to the city of a number of favelas that stand on hills."

Claudio Frischtak – economist and head of Rio-based consultancy Inter.B Consultoria Internacional de Negócios; Benjamin R. Mandel - economist at the Federal Reserve Bank of New York "For the first time in two decades, Rio de Janeiro in particular and Brazil as a whole now have programmes for public housing that aim to create affordable, conveniently-located homes for the poorer parts of the population on a significant scale. ... One challenge will be to build these houses where there is a current demand, where there is a labour market and access to mass transport, rather than in some remote areas of the city where land may happen to be cheap."

José Marcelo Zacchi – Research Associate at Instituto de Estudos do Trabalho e Sociedade (IETS) in Rio de Janeiro

















# CHANGE MAKERS

# WHO Clinton Foundation/ C40 Cities Sustania UIA

Urban life is not possible in complete isolation. Cities and their citizens are nodes in global networks of information, cooperation and reciprocal learning. The future belongs to those who understand and value these networks and are prepared to go beyond the borders of their own professional disciplines.

In the following conversations, representatives of four international organisations committed to the sustainable transformation of cities have their say. The organisations offer advice, connect people, spread knowledge and represent the interests of cities and their citizens. But what change do they actually want to bring about in concrete terms? With whom do they cooperate and how? Where do they see best-practice



### CHANGE MAKERS

examples of urban development? What strategies do they recommend to cities in order to develop a long-term, successful strategy of sustainability? And how do they convince local authorities to engage in interdisciplinary thinking?

The conversations about these questions illustrate what a multi-dimensional undertaking sustainable urban development is and how much it relies on the exchange of experience with others. It requires forward-looking initiatives and a suitable infrastructure – but also the ability to stimulate the enthusiasm of people. It requires political farsightedness and civil commitment – but also the will to take risks. The time to learn, experiment, and act together is now – not (only) for the sake of future generations, but for our own health and quality of life.

"Since we in the western world spend 90% of our time indoors, buildings are a focus area for living, business and society as a whole. Sustainable buildings with a healthy indoor climate, whether retrofitted or new build, can increase the learning ability amongst youngsters by 20%, enhance productivity in our workplaces and improve livability in our homes. This is what we in the VELUX Group will continue working for together with partners in the building industry."

Michael K. Rasmussen, Senior Vice President, Corporate strategy on Sustainable Living, VELUX Group.

## World Health Organization and WHO Healthy Cities Network

The WHO European Healthy Cities Network consists of European cities that are committed to health and sustainable development. Currently, it comprises more than 105 cities and towns from 30 countries. Its three core themes are: caring and supportive environments; healthy living; and healthy urban design. In addition, there are also national, regional, metropolitan, and thematic Healthy Cities networks in Europe with more than 1500 member cities. Healthy Cities is also a global movement, with networks established in all six WHO regions.

http://www.euro.who.int/en/what-we-do/health-topics/ environment-and-health/urban-health/activities; http://www.euro.who.int/en/what-we-do/health-topics/ environment-and-health/urban-health/activities/healthy-cities/ who-european-healthy-cities-network

### C40 Cities

The C40 Cities Climate Leadership Group (C40) was created by cities for cities. Founded in 2005, it is now a global organisation and network of 59 cities (including 40 of the world's megacities) committed to reducing greenhouse gas emissions and climate risks. Working across multiple sectors and initiative areas, C40 convenes sub-networks of cities with common goals and challenges, providing a suite of services in support of their efforts: direct technical assistance; facilitation of peer-to-peer exchange; and research and communications.

http://www.c40cities.org/about/

### Sustainia

Sustainia is a global collaborative platform that aims to create a model and vision for a sustainable future. It consists of a consortium of partners representing civil society, businesses and experts. The concept of Sustainia was developed by the Scandinavian think tank Monday Morning in a collaborative effort with global companies and foundations (Microsoft, GE, DNV, Philips Lighting, DONG Energy, Novo Nordisk, Tetra Pak, Cisco, Interface Flor, BIG Architects, Knoll, IKEA, Vestas, VELUX, Realdania, Scandinavian Airlines SAS, Ramboll, UBS Investment Bank) organisations and experts. Key organisational partners are the UN Global Compact and Arnold Schwarzenegger's new climate initiative R20 – Regions for Climate Action.

http://www.sustainia.me/

# Union Internationale des Architectes / International Union of Architects (UIA)

The International Union of Architects was founded in Lausanne (Switzerland) on 28th June 1948, to unite the architects of the world and to federate their national organisations. The UIA has grown to encompass the key professional organisations of architects in 130 countries and territories, and now represents, through these organisations, more than 1,300,000 architects worldwide. Over time, the UIA has become an accomplished non-governmental organisation, and a professional network of architects that reaches all continents.

http://www.uia-architectes.org/texte/england/ Menu-1/0-pourquoi-new.html

### CHANGE MAKERS

# HEALTHY CITIES FOR EVERYONE

Conversation between Agis Tsouros and Richard Hobday Health in cities is by no means only a question of medical facilities, says Agis Tsouros, Head of the WHO European Healthy Cities Network. As a factor that calls for stable ecosystems, daylight and clean air, as well as personal safety and a supportive social environment, health needs to be considered as early as the urban planning stage. But although life expectancy in Europe is rising continuously, health and well-being are just as unequally distributed in society as they have always been. It is therefore of prime importance that cities see health as a holistic design challenge that involves many different disciplines.

World Health Organization WHO Healthy Cities Network

**Dr. Agis Tsouros** is head of Policy, Social Determinants and Governance for Health Unit at the World Health Organization (WHO) Regional Office for Europe. He also heads the WHO Centre for Urban Health and the Healthy Cities programme. He was born in Greece and studied medicine and public health in Athens, Nottingham and London. Since 1989, he has been working in the WHO Regional Office for Europe, where he has had leadership responsibility for a range of areas, including health policies, urban health and healthy cities, health promotion, healthy ageing and public health functions and infrastructures.

**Dr. Richard Hobday** researches and advises on health in the built environment. He is the author of The Light Revolution: Health Architecture and the Sun and The Healing Sun: Sunlight and Health in the 21st Century.

RICHARD HOBDAY: Dr Tsouros, what makes a city desirable to live in, in your opinion?

AGIS TSOUROS: Our understanding of a city is that of a living organism; recognising that cities are engines in our societies for economy, for human and social development. We define a healthy city in terms of eleven qualities. The city should have:

- a clean, safe, high-quality environment, including affordable housing
- a stable eco-system
- a strong mutually supportive and non-exploitative community
- considerable public participation and control over decisions affecting life, health and well-being
- the provision of basic needs like food, water, shelter, income, safety, work for everybody
- access to a wide range of experiences and resources with a possibility of multiple contacts, interaction and communication
- adiverse, vital and innovative economy, encouragement of connections with the past, with varied cultural and biological heritage and with other groups and individuals
- a city form/design that is compatible with and enhances the preceding features of behaviour
- an optimum level of appropriate public health and care services accessible to all
- and a high positive health status and low disease status.

The message we convey mirrors our definition of health, which is not just the absence of disease but physical, social, spiritual and mental well-being. A city provides the environment that determines the health of individuals. The living and working conditions are actually social determinants of health.

What is your organisation doing to help cities fulfil these criteria?

The World Health Organisation realised that unless we engage with local governments and with leaders in urban settings and settlements, we cannot have the impact that we could have. It is simply not sufficient just to work at the national level. Local leaders, local governments, who have a proximity with communities, are in a unique position to mobilise action for health and well-being. And we are not only talking about health services here. Many people say that a healthy city is a city that has good health services. But the key determinants of health also include the way we build our neighbourhoods, how accessible green areas are, as well as how the quality of the environment is distributed in the city.

In other words, what matters is not just the average health standard in a city, but making sure that whatever the city has to offer is apportioned to everybody.

If you consider your own urban environment, the city you live in, is there anything that reminds you of how important health is in cities today? I can give you an example. The number one epidemic in Europe today is chronic diseases such as cancer, heart diseases, diabetes and so on. Behind this is a very big problem, which also unfortunately affects our children – obesity. What do you do about this? How do you make a city more active? Is it about building more gyms? No, you create opportunities for your community, for the young, for the elderly, for everybody to be more physically active.

The city of Copenhagen, where I live and work, has literally miles and miles of cycle lanes. 39% of the workforce of the city of Copenhagen goes to work by bicycle. Can you imagine what impact that has on energy, on traffic congestion and on the health of the population? If you just cycle to work every day, 25 minutes there and 25 minutes back, you have your dose of physical exercise for the day. It is safe, as the bike lanes in Copenhagen are on a different level from the pavements. That requires vision, a city that looks to the future. Copenhagen invested in something that created a lot of political controversy. It was not that God, on the seventh day, created this city with cycle lanes. Far from it – there was lots of debate, but today it's a jewel in Europe.

We have a saying in WHO: make the healthy choice the easy choice. If you are in

"We have a saying in WHO: make the healthy choice the easy choice. If you are in Copenhagen, cycling is a healthy choice, and it is an easy choice. If you are in my home town, which is Athens, the healthy choice can be a very dangerous choice."

Copenhagen, cycling is a healthy choice, and it is an easy choice. If you are in my home town, which is Athens, the healthy choice can be a very dangerous choice.

Inindustrialised nations, we take health services more or less for granted. But if we look on a global scale – what health issues in cities do you expect to become particularly important in the years ahead?

The socio-urban landscape of Europe is changing very fast. One issue is the ageing of the population. We have to create age-friendly cities. If the city is age-friendly, it is actually friendly for everybody because it takes into account the difficulties older people may have to move from A to B.

Then there is migration. The clientele of health services is very varied. The assumptions you made in the past as a service manager are no longer valid. You have to think of people from different cultures, with different backgrounds, and different sensitivities.

Then there is the issue of poverty, and I think the current economic crisis is probably going to stay with us for some years. How do we prepare for that?

The urban context is crucial to understanding the special needs of its diverse and rapidly changing population. Therefore, the only successful policies are those that are sensitive to inequalities. Furthermore, cites can provide environments that are supportive of healthy lifestyles and healthy living in general. We say we need to have healthy food. Well, how accessible is healthy food? How affordable is healthy food for different groups of population? If you are hungry for a sandwich and all you can find within 200 metres is a fast food outlet, the city is not supporting health.

Climate change is another issue. How prepared are our cities today to deal with extreme weather situations? How many cities today are completely unprepared to deal with heat waves or to deal with flooding? This is not uncommon at all in Europe today. This office here was flooded twice last year very significantly because we had torrential rain of a kind that we had not seen for centuries. There is a fear of epidemic viruses. What do you do if something like that strikes your community? These are new challenges that you have to be prepared for today. Health and sustainable development go hand in hand.

Where do you see the major need for improvement – and potential problems – in terms of urban health even in industrial nations? As I mentioned before, I consider two major areas important in this respect. One of them – let us call it the 'negative' side – is dealing with some of the big public health problems like chronic diseases, obesity and so on. The 'positive' side deals with questions such as: How do we enhance our urban population's resilience? How do we make them better equipped, better able to manage all these hardships that are happening, to be more adaptive, to be more creative, to be more responsive? Why is it that, in some countries hit by the economic crisis, some populations cope much better than others? It is not magic. It is because these populations have much more social capital. They are more cohesive. They are more inclusive. They are more empowered.

"It's great, it's fantastic, but who has access to it? Is there a waiting list? How many people will not have this in your city? Are you planning to have many more of those for everybody?" You can have a cutting edge facility, but how much difference does it make if the majority of your population cannot access it?"

Just imagine you were an elderly person: if you cannot get out of your house or apartment because you are afraid you are going to be mugged, because you feel insecure, because there are lots of architectural barriers in many places, or if you don't have within your proximity small grocery shops, or a local green space to go for a walk, what do you do? You stay at home, you get depressed, you get ill. So the cycle of illness is not: he is old, he will get ill. It is: what do you do to maintain the independence of these people through social interaction, through this kind of mobility that you need to have in your neighbourhood, in your city.

Have cities become healthier, on average, during the last 20 years? And, most of all, through what measures and factors? That depends on how you measure. On one hand, we have arguably become healthier, because our life expectancy has improved a great deal. Unfortunately this great gift is not distributed evenly in our society. The curve of life expectancy has gone up, but the health divide has also opened up. The differences between the haves and the have-nots are huge.

To give you an example, if you compare the life expectancy in the city of London between the West End, say Mayfair, and the Kings Cross/St Pancras area, the difference is ten years of life. You can do the same in places like Copenhagen or Stockholm or Budapest or anywhere you are. If you ask me what is the one thing we should do to improve the health in our cities, it is to think about inequalities.

Many local leaders and politicians are keen on creating tangible projects such as health centres or homes for older people. I have been to many of these. The question that I ask about them is, 'It's great, it's fantastic, but who has access to it? Is there a waiting list? How many people will not have this in your city? Are you planning to have many more of those for everybody?' You can have a cutting edge facility, but how much difference does it make if the majority of your population cannot access it?

From your experience, what are the most important prerequisites for successful long-term development of urban health strategies?

Health has to be a core value in the vision of the city. And you have to look for health and equity in all local policies. As I said before, there is no sector in our cities that does not have some director indirect impact on health: urban planning, environment, education, social services, cultural services, transport, energy and so on. It is not enough to say, health is

"It makes a huge difference if you can tell your peers that you are an active member of an international network ... that is committed to promoting value and evidence-based strategies and solutions that work for better health and well-being: to tell them that other member cities such as Barcelona, Copenhagen, Vienna, Liverpool and many others across Europe are all trying to do the same thing."

the responsibility of the health department – then you have lost the game. The whole issue is that you understand that this is a cross-cutting issue, an inter-sectoral issue.

How important is learning – and knowledge transfer – from one city to another? And how can such learning processes be organised?

It is very important, but in science there is very often this issue of transferability: 'Yes, well, I like this project from Copenhagen very much, but you know, we in Cardiff are very different'. So in a way you have difficulty learning from, and adopting promising practices that have worked elsewhere: you may be inspired, but there is something that stops you from taking good ideas on board.

In the Healthy Cities Network, we therefore provide the same principles, the same values, the same guidelines, to many cities throughout Europe and they adapt and develop them within their own social, political and organisational context. The beauty of this is that we now have a lot of experience of working across sectors from every country and the transferability of knowledge and inspiration is easier.

The second issue is that it is promoted through our networking – and through these large international projects is the legitimacy that it brings. For example, as the mayor of say Milan, you may be committed to improving and protecting the health of migrants who live in your city and to adopting modern and innovative policies – but faced with resistance or reluctance in the context of local politics. Under such circumstances, it makes a huge difference if you can tell your peers that you are an active member of an international network – the Healthy Cities Network – that is committed to promoting value and evidence-based strategies and solutions that work for better health and wellbeing: to tell them that other member cities such as Barcelona, Copenhagen, Vienna, Liverpool and many others across Europe are all trying to do the same thing.

How can companies and enterprises assist in the process of making cities healthier?

There is this idea of a socially responsible corporate sector, but this is a tough issue. I remember when I worked in the UK during the 1980s, an important source of air pollution in London was the chimneys of hospitals. However, people were saying that they were covered by Crown immunity. It was an oxymoron. Today, there is much more recognition that you must not do harm by polluting the soil, the air or the water. This may sound obvious, but it is still not respected everywhere.

The second issue is how companies integrate into their own community so that they are not just a profit-making island. This has to do with employment, social support, that the profit-making enterprise is seen as an asset for the community and not only an asset for a multi-national sitting somewhere else.

There is also a third dimension: employees. What do you do for your employees as an employer? This concerns not only the corporate sector, as the municipalities themselves are major employers, too. So what do you do for your employees as a municipality? What do you do to promote their health? Respecting the health and safety act is the minimum. It also has to do with management, with interaction, with participation; it has to do with mental health. Healthy environments are not just about air pollution, toxic wastes or noise – there is also this social dimension, which makes a tremendous difference to communities.

Scientists have found that people in industrialised countries increasingly do not get sufficient exposure to daylight and to the sun. How big a risk do you consider this?

I come from Greece originally and last week I went to see my GP for my annual checkup. I had a blood test and he said to me, 'I have some interesting news for you. All your tests are very good, but I have one finding that is very funny for a Greek – your vitamin D level is very low.'

In general, however, I am rather optimistic in this respect. In some countries you may have much less of an opportunity to enjoy sunlight, but in general, there is increasingly more outdoor life in cities in Europe everywhere. Certainly cities are becoming more open, providing more facilities and public spaces for physical activity outdoors and for socialising.

Another issue that is receiving increasing attention is health in buildings. How does the WHO define healthy houses, and what is your organisation doing to improve health in buildings?

We do a lot of work in this area. Due to our increasing understanding of the social dimension of health in recent years, even environmental health in housing and urban planning now encompasses much more than looking at toxic substances, pollution, noise, and safety in the home. For example, how do you adjust the apartment of someone who has difficulties with mobility? There are issues that relate to neighbourhood planning and lighting, so that people can easily interact and get out of their places. Another big issue of healthy urban planning guidance is the opportunity for the consumers, as it were, to have a say in the way their environment is designed. This creates more ownership, it creates more empowerment, it also creates better results.

How is the WHO addressing current building codes and standards in different countries in order to better reflect health issues? Do you have any input on those codes and standards? Yes, by producing standards for healthy housing. For example, we have standards for air pollution of global importance and, as a mayor, you can adopt those standards, but there is no obligation for you to apply them. On the other hand, if air pollution in your city exceeds a certain level, journalists will be the first to say, 'Air pollution in Milan is three times the level recommended by the WHO'. It is by persuasion, inspiration and providing information that our standards are making a difference. That is how it works.

How would you define the role of your organisation in the improvement of urban health?

A major who activity during the last 24 years has been running the European Healthy Cities Network. It involves 105 cities working directly with the who European Region, and a total of 1,500 European cities that are affiliated to national networks of Healthy Cities. In the meantime, the network has also turned into a global movement as the idea has caught the interest of cities around the world.

In this network, we work directly with local governments. We have a programme, we have guidelines, objectives and requirements for cities to be part of this. The cities have to commit to work with us over phases of five years with specific goals. We pay great attention to processes and capacities for change.

"We have struggled for more than ten years now working with urban planners from cities around Europe, trying to figure out how health considerations can be integrated into master planning, neighbourhood planning, regeneration schemes and related processes ..."

Overall, our approach consists of four main elements: strong leadership; management of change and supporting mechanisms for joined-up working across sectors and participative governance; strategic, partnership-based planning for health, sustainable development and well-being; and active formal and formal networking. Cities make a small financial contribution to be members that allows the WHO network to be self-supporting. One prerequisite is to work across sectors. That is a must. The cities have to set up mechanisms to work with other sectors, other departments, also to involve civil society and the corporate sector. Furthermore, we have very specific areas of work, such as health and equity, the health of older people, health of children, migrants, or issues of lifestyles and urban planning.

One of the areas that we really feel proud about is our contribution to the practice of urban planning. We have struggled for more than ten years now working with urban planners from cities around Europe, trying to figure out how health considerations can be integrated into master planning, neighbourhood planning, regeneration schemes and related processes in order to meet the needs of different population groups such as the young and elderly people. A lot of practical experience has come out of that, which in turn gives credibility and strength to our movement. We also disseminate this knowledge to all cities in Europe and beyond that are not part of our network.

What different disciplines and stakeholders in cities do you bring together?

First of all we bring together the key decision-makers of the city. It has to operate at that level. If you really want to address urban health seriously in an inter-departmental, inter-disciplinary way, the mayor and the city government have to give their blessing and support from above and set up those mechanisms.

We also work with doctors, social scientists, architects, planners, educational experts and physical activity experts, so it is a truly inter-disciplinary matter. When we started the European Healthy Cities Network, whenever we sent a letter to a city inviting them to send a representative to one of our meetings, they would invariably send a medical doctor. If we invite them now, they send an architect, an urban planner or a social worker. The message that health is the 'business' and concern of many disciplines and sectors – including health professionals, of course – is well appreciated in cities.

How much influence do architects and urban planners have on urban health?

They have a huge influence, but until recently, health was not necessarily part of their vocabulary. This used to be different; in the 19th century, public health and urban planning were very closely connected.

In a way we are making those connections again. We enable architects and urban planners to see their own influence over people's health. Since 1998, we have been work-

"Think of mobility and physical activity or social interaction. Think of the design of streets and homes in terms of sense of security, safety and access to support. A well-designed neighbourhood can do wonders for the health of those who live there; the young, the old, the families, those who have disabilities or those who are newcomers."

ing very closely with urban planners, have produced a number of publications and we have a group of cities that work on urban planning and design. I think this is one of the most promising areas for the future. It is now well understood that the health impacts of the built environment not only include noise, air pollution or toxic soil pollutants. The built environment can influence our physical and mental health and our social well-being in many ways, both directly and indirectly. Think of mobility and physical activity or social interaction. Think of the design of streets and homes in terms of sense of security, safety and access to support. A well-designed neighbourhood can do wonders for the health of those who live there; the young, the old, the families, those who have disabilities or those who are newcomers.

How can cross-disciplinary, collaborative thinking be brought into the everyday administrative routines of a city? The mantra of cross-cutting inter-sectoral partnerships has to be supported by some good argumentation. One of the reasons why Agenda 21 failed in many places is because it was taken up by one sector – the environment sector – who worked a lot in the ecological field, and the social and economic dimension of sustainable development was left out. The recognition of the need to work across sectors, the political commitment, and the governance for health and well-being are essential. To achieve this, you need to set up both formal and informal mechanisms.

One needs to invest some time in doing that. You need sanctions and you need senior decision-makers involved. If the coordinator of Healthy Cities has to go through 15 secretaries to see the mayor, forget it. The person in charge has to command respect and authority. He or she does not need to be at the top of the administration, but has to have the ability to pull people together, without antagonising. It is a matter of cobenefits and co-production. Cycling in cities for example benefits the energy sector through energy savings; it benefits the health sector because active lifestyles protect us from chronic diseases and make people more productive at work; and it benefits the transport sector because there is less congestion. In other words, one intervention results in a wide range of benefits for many sectors while, at the same time, the policies and activities of many sectors can have a positive or negative impact on health. Health is a most precious common good.

"Health has to be a core value in the vision of the city. And you have to look for health and equity in all local policies. ... It is not enough to say, health is the responsibility of the health department – then you have lost the game. The whole issue is that you understand that this is a cross-cutting issue, an inter-sectoral issue."

Health should be a performance indicator of any city. Economic indicators alone do not, and cannot, adequately reflect the success of city policies and strategies. If you read policy documents from a national and local level, everybody talks about intersectoral action. But when you try to find evidence that it is happening, you find very little. Why? Because we don't think through the mechanisms, the processes, and the prerequisites that can make inter-sectoral work become a reality. People feel much safer and comfortable working within their silos. Without effective leadership and capacity for the shared and participative governance that supports joined-up approaches, this kind of collaboration doesn't happen. People might attend the first meeting of a cross-departmental task group on urban health. But to truly turn this into a lasting and sustainable process, you need a vision, sound arguments as to why health and equity are key for the future of the city and mechanisms and processes to support joined -up working and shared ownership.

Asking more specifically about the organisations we are interviewing in Daylight & Architecture: which of these have you already collaborated with, and where could you see interesting potential fields of collaboration?

At Healthy Cities, we have not worked with the Clinton Climate Initiative or Sustainia, but we have contributed to conferences of the UIA in the past. I think it would be quite interesting, as a result of this initiative and this article, if there was to be some interaction and collaboration.

The goals of these organisations are clearly relevant and complementary to what we do. Our entry points are health, equity, well-being and sustainable development. We have well established links and mechanisms for working with local governments across the European Region. At the same time, Healthy Cities is a global movement with strong initiatives in every part of the world.

The collaboration with local governments is a tremendous asset and channel of valuable communications for us, given that by and large UN organisations work mainly with national governments. It should be noted that most of the global health or environmental challenges in the world cannot be effectively tackled without the active engagement of local governments and local communities.

Secondly, we work closely with architects and planners from many cities. We have also set up a WHO Collaborating Centre at the University of the West of England in

Bristol that supports our work on healthy urban planning and design. Our environment division includes programmes on housing and health, air pollution as well as climate change and its impact on health

This year the WHO Regional Office for Europe will launch a new European Health Policy Framework and Strategy for health and well-being – Health 2020 – which adopts a 'whole of government' and a 'whole of society' approach to health and well-being. This strategy underlines the importance of all levels of government and the key role of local leadership for health and sustainable development.

What questions that arise from your own work do you have to the representatives of these organisations? About what issues would you potentially like to start a dialogue with them? If our common interest is health and well-being in urban life, if we share a common vision and understanding of the attributes of good urban life, then we have a lot in common and I can think of a number of areas where collaboration could happen. Half the European cities in the C40 Cities Climate Leadership Group are members of the who Healthy Cities network and the rest are members of their respective National Healthy Cities Networks, so there is clearly an excellent basis for exploring synergies and collaboration with the Clinton Climate Initiative.

Another example: through the UIA and other similar organisations, we would like to give more visibility on urban health issues and to spread awareness. You see, sometimes we keep talking to the converted. While we have ample opportunities to engage and talk with architects and planners in the cities involved in the WHO Healthy Cities networks, we would be very keen to share our ideas and experience with the associations and other bodies of architects and planners. This is what I would like to ask them: 'Would you be prepared to put healthy urban planning as one of the core themes of your next conference? We would be delighted to join you and work with you.'

Overall, is there a better understanding now of the factors that influence urban health than there was 20 years ago? Where do you see major need for future research? There is better understanding now because there is more evidence, but there is still not enough evidence. I find very often that we are very good at initiating action and doing work with our partners, but we are not very good at documenting and disseminating what we learnt from it. There is a need for more research and evaluation of initiatives. We need even more robust evidence on the links between urban planning/design and health. Especially if one can also link it with some specific areas: healthy urban planning for the elderly, or for children, or making cities more accessible to people with physical disabilities. There are also issues that relate specifically to new cities, as opposed to interventions in existing cities. Also, how to link regeneration, mobility, health and sustainable development? These are areas of great potential.

Mahatma Gandhi said: "Be the change you want to see in the world". What kind of change in the world do you want to be?

We stand for health and equity for all: cities that are conscious of all the issues and factors that make a difference and contribute to the health and well-being of their people. If you are aware of these factors, you can create not only healthier cities, but also more prosperous and more sustainable cities.

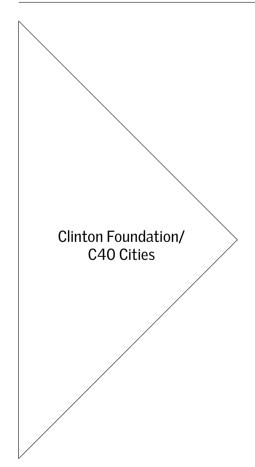
## CHANGE MAKERS

# CITIES: LEADING BY EXAMPLE

Conversation between Seth Schultz and Phil Allsopp Cities have become major players in the battle against climate change, says Seth Schultz, Global Director of Research for the C40 Cities Climate Leadership Group. His organisation helps the world's large metropolises find options for action and take measures to reduce greenhouse gas emissions and climate risks. Above all, it brings cities from all over the world together in order to learn from each other and along with each other. Playing a leadership role and taking risks is an integral part of this effort – by working together cities are able to accelerate their work significantly, and make a global impact on climate change.

Seth Schultz is the Director of Research at C40 Cities Climate Leadership Group (www.c40cities. org), a network of the world's megacities taking action to reduce greenhouse gas emissions. He formerly served as the Director of the C40-CCI Climate Positive Development Programme, an urban laboratory of large-scale development projects helping cities drive economic growth, meet sustainability targets, and achieve net-zero emissions. Seth is a frequent speaker about the work that C40 Cities are doing around the world and works to ensure that global best practices are applied locally through specific data analysis. Prior to joining C40, Schultz worked for over a decade as an environmental consultant at all levels of government.

Phil Allsopp has a professional and academic background in the fields of architecture, public health and systems dynamics. He is a former President and CEO of the Frank Lloyd Wright Foundation and, since its foundation in 2010, has been principal of the multi-disciplinary consultancy, Transpolis Global. Allsopp's main fields of interest are human habitat, public health and public policy, particularly the connections between our built environment health and well-being.



PHIL ALLSOPP SETH SCHULTZ

"Our member cities are already acting on these issues, so we discussed how to act at a more rapid pace. And that, we think, will then change the global agenda. We are not waiting, and do not need to wait, for any type of international or national agreements. This is a movement led by the cities. It's created by cities for cities and we're going to town on it, so to speak."

PHIL ALLSOPP: Mr Schultz, in your personal perspective what makes a city a great place to live in? SETH SCHULTZ: I believe there is a list of ingredients that cities need to be vibrant and healthy places. I would compare this to preparing a meal: the result depends on how the ingredients are combined, but the key ingredients must be there. The first is public transport. Residents have to be able to move easily about and enjoy the density of an urban area. Otherwise that urban area becomes a confinement, a gridlock. Secondly, a city needs open spaces. There are huge differences between cities that have open green spaces and those that don't. But it is not sufficient just to have a green space and leave it at that. I find it amazing how, once a city administration interacts with the community in the right way, the citizens embrace their public parks and spaces, making them a place for the community to come together. Thirdly, a city needs to be a healthy place to live, and a lot of cities are focusing very closely on this topic at the moment, particularly on air quality. Action in this field can range from making public transport accessible and affordable to imposing bans on smoking or idling cars.

Most of the world's megacities are located on coasts. For these cities, I would also add access to waterways and coastlines to our list of ingredients. In many cities, the lack of appropriate planning practices and the rate of expansion impede access and, for example, major roadways run along the shore, making it physically challenging to get to the water.

In addition to this, there is the issue of contamination of the water itself. Over the last decade a lot of cities have spent large amounts of time, effort and money to clean up their waterways and coastal areas – to the great benefit of the local community.

If you consider your own urban environment and the experiences or conversations you recently had, is there anything that reminded you that climate change is indeed happening and cities need to act against it? The northern hemisphere land surface temperature for July 2012 was the all-time warmest July on record. And I can tell you we experienced a number of heat waves in New York where I live and work. I also recently travelled, both for vacation and work, to Great Britain, where they had just broken their national records for the wettest April to June period. These two experiences in juxtaposition were a very real reminder for me that climate change is indeed happening.

But cities everywhere are experiencing climate change-and taking action to address the issue.

C40 and our partner, the Carbon Disclosure Project, recently worked with CNN International to create an infographic showing five global cities on the frontlines of

climate change. This illustrated the challenges they are facing due to climate change and what they are doing to respond to it at the city level.

From each story, you could see that the international debates on climate change did not matter to the cities at all. Just by looking at what the cities are doing and where they are making investments, it becomes evident that climate change is happening and that cities are taking a leadership role in responding to it. The City of Rio de Janeiro, for example, has created a state-of-the-art Operations Centre, a weather forecasting system and a smart map capable of analysing 60 different layers of data streamed from sensors around the city. Rio is now able to integrate real time information, allowing decisions to be based on the best data and implemented across all City departments. The City is able to anticipate natural disasters such as landslides; alert affected communities; and improve the response time.

You already mentioned various activities of your own organisation, the C40 Cities Climate Leadership Group. How and why was C40 founded, and what is its organisational set-up?

C40 was created in 2005 by former Mayor of London Ken Livingstone, and expanded via a partnership in 2006 with President William J. Clinton's Climate Initiative (CCI). In 2011, under the leadership of C40 Chair, New York City Mayor Michael R. Bloomberg, C40 and CCI forged a closer alliance that positions the combined effort as one of the pre-eminent climate action organisations in the world.

From the start, C40 was conceived as a network of large and engaged cities from around the world, committed to implementing meaningful and sustainable climate-related actions locally that will help address climate change globally. The impetus was not only the urgency of climate change but also the rapid urbanisation of many parts of the world – cities are home to more than 50% of the world's population. So not only did you have this issue of mayors committed to action, but also this huge swing of people going from rural areas into urban areas. You also had ageing infrastructure, and you had poor planning from decades of policy that, in some cases, didn't make sense or was too constrained. It was clear that cities can and must be part of the solutions. It all came together and the timing was right.

How many cities are involved in the network?

We started off with 20 cities and quickly expanded to 40 cities from both the developing and developed worlds. The organisation is still called C40, although our network has grown to 59 cities.

Ithink it's important that this sort of initiative gets much more attention on the streets in places like Phoenix, where I come from. The green apartheid that exists, if you want to call it green, is apparent everywhere. We have very poor areas. We have people who need the best advice and the best coaching and the best technology in order to shrink their rapidly rising utility costs, because this is depleting their ability to buy decent food. There's a whole range of issues connected to climate change, particularly in areas where we have extreme climates, like in Phoenix.

I agree climate change is very much a cross-cutting issue. Public awareness and local action are on the rise ... but there is much more to do. If you look at the data we collect from our member cities, the number of policies and actions that they are already taking to address climate change is stunning.

"As C40 Chair New York City Mayor Bloomberg often says, 'if you can't measure it, you can't manage it.' Measurement really is the precondition for effective action."

What is your organisation doing in concrete terms to help cities make progress in the fight against climate change?

It is critically important for the world to understand that cities are playing a leading role on this issue – taking local action with collective global impact. Our role is to help facilitate and accelerate that action. At the Rio+20 conference in Rio de Janeiro in June, the nations of the world came together to talk about the sustainability agenda. C40 was there as well, but did not focus so much on talking about how to reach a global agreement on sustainability issues. Our member cities are already acting on these issues, so we discussed how to act at a more rapid pace. And that, we think, will then change the global agenda. We are not waiting, and do not need to wait, for any type of international or national agreements. This is a movement led by the cities. It's created by cities for cities and we're going to town on it, so to speak.

How to make things go faster is a question that must be on everyone's mind at the moment. On the other hand, one of the real problems that we observe in Phoenix is property rights and other legal barriers to actually making things happen. Has C40 been successful in propelling action through and over and around those barriers?

I think the answer is twofold. When we started our initiative in 2005, things looked dramatically different. At that time, cities didn't have a director of sustainability. Now, not only do they have a director of sustainability but they have an entire sustainability department. In many cases the department of environment, which they may already have had, has now broadened its scope to include sustainable urban planning, green growth and similar issues. So progress has clearly been made.

Nonetheless we cannot forget that this is driven through political processes. Mayors are going to take the action that they are being required to do by their citizens and that is going to get them re-elected. One of the barriers, in terms of being aggressive on climate change, is that, in some cases, it's risky, and if you do it and it doesn't work out, you may not get re-elected. Focusing on cities that are in a leadership position and are taking risks to do this is essential. One of the things that we can do is to acknowledge a city that has really broken some ground. This might inspire other cities to dare and undertake similar projects that may have been on their minds for some time already, but have never been implemented for a number of reasons. So we provide a network for our cities to share information, reduce their risk and lower the entry to the market for certain solutions or projects.

I sometimes wonder whether cities' action against climate change is more of a kind of grassroots response along the lines of 'we have to do something', or whether it is also influenced by increasing insurance risks. As I understand it, the insurance industry is already placing climate change as one of their principle areas of concern.

They are. The insurance industries have been very quietly gathering massive amounts of information and data because they see the impact of extreme weather events through the insurance claims they receive. What is climate change? What is severe weather? And how do you track that and the economic damage it does? These questions are now among the key criteria in terms of insurance, regardless of whether it is huge bonds for land development projects, or infrastructure. If you are going to spend several billion dollars on infrastructure, you have got to get your investment insured, and two of the main criteria that are being looked into in these cases are climate risk and adaptation.

"It has been our strategy from the beginning to work with the world's megacities. The members of C40 represent more than 21% of the world's gross domestic product and 7% of the world's population. There is huge power in that"

Do you see a somewhat closer symbiosis between the insurance end of the spectrum and the city planning end of the spectrum, faced as they are with obvious problems? Ithinkwe're getting there, but we're still a long way off. For now cities are still grappling with how, and why, to do this. In the realm of new developments, projects are often still handed over to private developers to deal with, including the associated risks. So as a developer, I might take on the risk to a certain degree if the city compensates me through a cheaper deal on the property, by just giving me the property for free, or granting me a tax incentive. Another model to solve these issues is public-private partnerships. Cities are obligated to the citizens to get the best possible deal for taxpayers' money. Looking for the best deal, however, traditionally doesn't dovetail with acting aggressively on climate change. To change, this, we need to understand avoided costs and reduced risks in much greater detail so that they can be taken into account in assessments of financial performance.

Let us look at the measures that cities can take, and are taking, to act against climate change. What impact has C40 Cities had in the six years of its existence? And how do you evaluate your impact? Finding an answer to this question is a large part of our current work. How can cities measure these issues? What key performance indicators should they be looking at? There are a number of items that we are working on to answer these questions. A first step is getting cities to report their actual greenhouse gas emissions. We are now doing this through a partnership with another non-profit organisation, the Carbon Disclosure Project (CDP), which is based in the UK. Together, we created an annual reporting process for our cities. As cities begin to report, they have to look inwards and across different departments to get information; and this information gets richer and better over time. This then allows cities to look more holistically across their governance and understand where and how to act.

Secondly, when we were looking at the information from the cities, we soon discovered it was apples and oranges, so to speak. It is very hard to determine if certain initiatives or programmes can be transferred from one city to another if we do not understand all their issues, and if we cannot see whether the local framework conditions are comparable at all. Cities operate within different political and legal frameworks and this often prevents one city's model from being adopted in another. Understanding these issues will have huge effects, because it will enable us to match up cities more effectively, and provide for stronger networks working together and achieving goals.

A primary effort in this field was our publication of the Climate Action in Megacities Report in 2010. For the first time ever, it mapped the powers that our member cities had in certain fields of climate change action and the policies they had implemented. By 'powers', I mean what the mayors had jurisdiction over, what assets they controlled. Which cities own their streets, for example? Are these governed by the federal or state or provincial administration? Once we started mapping these types of issues, information and opportunities started to proliferate and we, as an organisation, can now convene our cities in a much more strategic way.

PHIL ALLSOPP SETH SCHULTZ

"It is very off-putting to talk about doom and gloom. It makes people not want to hear and know about the issues. If the issue is too large and too out of control anyway, they will ask then why even bother? Instead, we ought to show people that something is actually happening in their neighbourhood that they can get involved with and show them how. Then the conversation will be a totally different one ..."

So in this data collection, you would be able not only to map the organisational dynamics that exist in different cities but also to find out whether or not certain actions have specific short or long term effects? Yes, absolutely. And we will be able to equate actions – the implementation of policies, programmes or projects – to GHG emission reductions right across the global network. As C40 Chair New York City Mayor Bloomberg often says, "if you can't measure it, you can't manage it. Measurement really is the precondition for effective action.

I can see that. But a lot of detrimental things still happen in cities, particularly as political decision-makers routinely turn vacant building lots over to competitive bids from developers. Quite often solutions are literally just shooting from the hip, and the evidence base that many builders, developers, architects and engineers have is pretty poor. In many cases the value proposition is only based on assertions that their proposals will yield certain results. But the knowledge base for that and the data underpinning it is much, much thinner than anyone would feel comfortable with.

I would like to dig a bit deeper into the question of what cities can do – and are doing – to combat climate change. In brief, what do you consider to be the most important prerequisites for a successful long-term climate strategy in cities? This actually goes back to what we were just talking about; you cannot manage what you do not know. I think the critical thing for cities is to make sure they understand what their greenhouse gas emissions are, and have a plan to both reduce them and to adapt to the climate changes that are occurring, and will be occurring, in their cities. Ultimately, this will result in a climate action plan. The better the information and data a city has and the better climate action plan it develops based on them, the greater the long-term success will be. If you have that information then you can effectively set targets – and then you can begin back-filling the actions to get you there. If you do not have that information, it becomes very difficult because then you do begin shooting from the hip.

You made the point that you can't manage what you don't know. This implies that cities need to take on explicit action, an explicit act of the institutional bureaucracy, to measure their GHG emissions and log them. Yet cities might also see that as an extra budget burden. How does your organisation convince them that this is actually beneficial?

Part of it is education and understanding. Cities are constantly pummelled with information and data requests and it becomes very resource intensive. It is critically important that we streamline the process and make sure cities understand the value of what they are reporting, how they are reporting it, and how it is going to help them in their day-to-day administrative routines. If we can do that, massive efficiencies can be gained. Sustainable urban development requires the integration of all the practices that can contribute to it: transport, waste, energy, you name it. By mapping their greenhouse gas emissions, cities can also get a clearer understanding of how they operate, of their own priorities and establish a better cooperation among all these different departments. There is now an appetite for cities to join this process because in the past, the mapping of greenhouse gas emissions was mainly done by consultants from the private sector. Now cities have started to realise that they need to have some level of ownership of that information themselves.

My experience has been that most policymakers are looking for that one small thing, that policy which, if they implemented it, would have a systemic, positive, cascading effect across the system. From what you just told me, mitigating greenhouse gas emissions might indeed bring these kinds of positive systemic benefits, economically, socially, culturally and in terms of health. Absolutely. You can map a lot of things through the lines of greenhouse gas emissions. They are not the only thing you should be tracking, but definitely one of the key metrics for urban sustainability.

You mentioned that education and underpinning of data is important for moving people beyond their established routines. But how do you overcome the entrenched viewpoints that have very little to do with data and knowledge, but more to do with firmly held beliefs? For example, there are quite a few people in the United States who assert that the Agenda 21 is a UN initiative to take over the United States Constitution, and similar things that are really laughable. When you ask them, which part of the Agenda 21 is specifically designed to subvert property rights, ownership and independence, they will only respond, "You canreadbetweenthelines". Butwhen I look between the lines I see nothing but white paper. That must be a tremendous issue for your initiative particularly in some parts of the United States.

C40's direct constituents are cities around the world that are strongly committed to leadership on climate action; for the most part we find that this is driven by strong support from citizens in the local community. But as you suggest, this is not always the case. A lot comes down to how the issues are communicated.

Part of effective communication is knowing your audience and if you know that their back gets up when they hear the words 'climate change' or 'sustainability', don't use those words. Talk about economic efficiencies instead, talk about job creation, talk about a more engaging environment for people to live in, talk about health quality. It is very off-putting to talk about doom and gloom. It makes people not want to hear and know about the issues. If the issue is too large and too out of control anyway, they will ask then why even bother? Instead, we ought to show people that something is actually happening in their neighbourhood that they can get involved with and show them how. Then the conversation will be a totally different one...

In a nutshell, how would you encapsulate the role that C40 plays as an organisation, collaborating with your member cities? C40 was created by cities for cities. As an organisation, we help cities identify, develop, and implement local policies and programmes that have collective global impact. Working across multiple sectors and initiative areas, C40 convenes networks of cities with common goals and challenges. But our role doesn't end there. We provide a suite of services in support of their efforts: direct technical assistance; facilitation of peer-to-peer

PHIL ALLSOPP SETH SCHULTZ

"A good example, whether it is a project or a study, that is tangible, transferable and triggers a conversation, is the first step to getting cities to invest their limited resources. Also, how do you engage the business community? You can talk as much as you want, but as soon as you have a tangible project, they will say, 'Interesting. If I join in and invest in it, I can have an advantage, so let's do it'."

exchange; and research and communications. As a result of these efforts, C40 has helped to position cities as a leading force for climate action around the world. This helps to get cities a seat at the table with higher levels of government – to forge alignment of key policies and to demand both more autonomy and more support in taking local action.

You focus mainly on the world's megacities. Why is this, and how can smaller cities become engaged with the C40?

It has been our strategy from the beginning to work with the world's megacities. The members of C40 represent more than 21% of the world's gross domestic product and 7% of the world's population. There is huge power in that.

That said, we also recognise that there are smaller cities that are doing amazing things; we need to give them an opportunity to shine, and there is an opportunity for us to learn from them. So we have created a category of cities within our organisation called 'affiliates'. An affiliate is not a megacity but a city that is exemplary in terms of their climate change actions and policies, such as Stockholm, San Francisco, Portland and Copenhagen.

Thirdly, and lastly, we forge strategic partnerships that help us support and proliferate what is happening in our member cities. One example is our annual reports on the efforts of C40 Cities, but also of other non-member cities, which we publish in collaboration with the Carbon Disclosure Project. The first report in 2009 included six non-C40 cities. Last year, we had 26 non-C40 cities participate and I am very hopeful that this year we will have close to 60 non-C40 cities responding. This is a clear example of what our leadership can do in terms of driving impact to other cities.

What strategic partnerships does the C40 have with other organisations?

We have several across the organisation. One of them, as mentioned, is the online reporting platform that we set up in collaboration with the Carbon Disclosure Project. Another is our three-way partnership with ICLEI, the World Resources Institute (WRI) and the World Bank, in which we developed the Global Protocol for Community-Scale Greenhouse Gas Emissions (GPC). It might not appear so at first glance, but it is quite crucial that cities apply the same methods when collecting emissions data. When we started our work, comparing emissions data from different cities was not always possible. One of the things that we realised very quickly was that we needed a systematic global process for cities to calculate their GHG emission footprints – yet that did not exist.

"Cities, as a result of the financial constraints, are being more creative than ever to achieve their goals. This is one of the highest-level priorities in all our discussions with cities. It is also critically important to attribute a different model of success to projects. How do you change the risk versus reward characteristics of cities' behaviour?"

Now that we have created the GPC methodology, and once cities are consistently using it, we will be able to make an 'apples-to-apples' comparison. Furthermore, the protocol is structured in such a way that it allows information to flow up to a regional and international level.

Do you see a relationship between the attractiveness of cities that collect and display this data and the decisions of corporations on where they set up, relocate or expand their business? Absolutely. There is no question about that. Cities that are active in this field are becoming increasingly attractive for businesses that want to be part of a low-carbon economy. There is also another interesting result from last year's data. Eleven cities in the C40-CDP Report already collect data on their so-called Scope 3 emissions, which include the indirect emissions of all goods and services consumed in the city. We found that cities can actually have quite a lot of impact through their governmental procurement policies. Moreover, if you consider the embodied emissions of goods from the private sector that are manufactured in and distributed from a city, this is an incredibly interesting field of research and action in terms of Co $_{\rm o}$  mitigation.

Where do you still see more need for research and development regarding cities and climate change? Two of the biggest areas are risk and adaptation. Also with climate action plans and greenhouse gas footprints, I see the necessity of further efforts being made, especially in cities in developing countries. A lot of great work has been done in this field already, but not to the level of detail and robustness that will allow us to help cities to make strategic decisions on what to do.

Furthermore, I would like to add one more issue: to underpin any assessment of risk and of potential adaptation measures, we need to be able to calculate the economic impact of climate action. A lot of good work has already begun there, but we also need the other underpinning elements, such as reliable GHG inventories, before we can make any sound financial assessment.

PHIL ALLSOPP

SETH SCHULTZ

There is a saying that 'one experiment is better than 1000 expert opinions'. How far do you hold this to be true in cities' future efforts for greenhouse gas mitigation? I fully agree. A good example, whether it is a project or a study, that is tangible, transferable and triggers a conversation, is the first step to getting cities to invest their limited resources. Also, how do you engage the business community? You can talk as much as you want, but as soon as you have a tangible project, they will say, 'Interesting. If I join in and invest in it, I can have an advantage, so let's do it'. This is central to what we do at C40 – helping cities to initiate projects and policies and sharing their ideas and knowledge as rapidly as possible with other cities.

One of the challenges to creating exemplary projects is, of course, the global economic 'reset'; there was a giant reset button in 2008. Cities have become a lot more risk averse, in many cases they are debt-ridden, everything is budget-driven. How do you see C40 acting as a catalyst to change that perception of risk? Because after all, if we do not experiment and create a knowledge-base of what does and does not work, we will run an even higher risk in the long term.

This is exactly right. Cities, as a result of the financial constraints, are being more creative than ever to achieve their goals. This is one of the highest-level priorities in all our discussions with cities. It is also critically important to attribute a different model of success to projects. How do you change the risk versus reward characteristics of cities' behaviour?

Mahatma Gandhi once said, "Be the changeyou want to see in the world". What kind of change in the world would you want to be, both personally and with your organisation in the years to come?

As regards our organisation, the change that I would want to see is happening already. What C40 has achieved since 2005 is not short of exceptional. It is exciting and rewarding to see the level of change that C40 has already had and will continue to make. On a personal level, I consider myself quite fortunate to be living out the change I want to see by having the opportunity of working at C40. I get to help cities around the world continue to take aggressive action on climate change while simultaneously helping to create better environments for people to live, work and play in. I am not sure I could ask for much more than that.

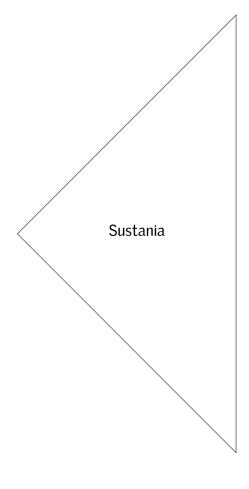
## CHANGE MAKERS

## VISIONS FOR SUSTAINABLE LIVING

Conversation between Laura Storm and Jakob Schoof Enough of horror stories and scenarios of catastrophe! Sustainable lifestyles have nothing to do with fear about the future but with quality of life and active participation in society, says Laura Storm, Executive Director of the international platform for sustainability, Sustainia. Only when we learn how to talk positively about climate change and sustainability will it be possible to bring about the profound social transformation that is needed. What is most important in this context are an end to mutual recriminations and the readiness to collaborate across the borders of countries and disciplines dispassionately and with good will.

Laura Storm is the Executive Director of Sustainia, a non-profit organisation based in Copenhagen. In the run-up to the UN Climate Conference COP15 in Copenhagen, she was the Project Director of the Copenhagen Climate Council, a group of CEOs, scientists and policy designers, including Steve Chu, Jim Rogers and Sir Richard Branson. Laura Storm holds an MSc in Political Communication and Leadership from Copenhagen Business School.

**Jakob Schoof** has been an editor of Daylight & Architecture since the first issue was published in 2005. He also edits the international magazine for sustainable architecture, Detail Green.



JAKOB SCHOOF LAURA STORM

JAKOB SCHOOF: Mrs Storm, what is your notion of an ideal city? What makes a city desirable to live in, in your opinion?

LAURA STORM: I believe a successful city is one that, first and foremost, considers the people living there. A city must be designed for its citizens, not for anyone or anything else. When I visited Detroit just a month ago, it was obvious to me that this is a city built for cars, not people. The urban space is not at all inspiring, which instils a sense of no hope or big ambitions in its citizens. Successful cities, on the other hand, have succeeded in creating a built environment that is attractive at eye level and accessible. To me, 'accessible' implies a high degree of mobility both by bike and by public transport, without the need of a car. This also means a city where creativity and fun are plentiful and visible on streets, parks and other urban spaces that invite you to engage. You should not have to enter buildings to participate in the activities of a city. I think that many Us cities have a hard time making their layout more accessible in this regard. In these cities, you have to enter an air-conditioned building or a city mall to actually meet people. Driving around in your car, you only see buildings. In the city I live in, Copenhagen, we bicycle a lot, and people spend a lot of time outdoors even in winter, as the outdoor public spaces are attractive.

There are other elements that are important to creating an attractive city, of course, which have less to do with the built environment. These include good education systems, extended opening hours for libraries and other public facilities, safety issues and much more. If I had to pick just one factor, it would have to be an accessible city that is fun and creative.

In what way is your organisation Sustainia helping cities to achieve all these qualities?

Sustainia is still a fairly new organisation, but one of our goals is to inspire mayors and political leaders to transform their cities. We do this by identifying and putting forward best practice, and present these in a concrete and applicable manner. Currently, we are discussing with Asian and US cities on how to create an exciting vision for their city and visualise it for their citizens.

In June this year, we launched the first Sustainia City Guide – the guide to Copenhagen in 2025. The Sustainia City Guides seek to communicate and visualise what living what be like in your current city if it were to be fully transformed into a sustainable city. In the Copenhagen case, there already was an extensive plan in place on how to make the city  ${\rm CO}_2$  neutral by 2025. It is a brilliant plan. However, the vision was communicated in a traditional, rather boring, report that is likely never to be read by the people it concerns the most – the citizens.

In my opinion, citizens are the greatest change-makers. They are the ones who really need to be on board for this strategy to be implemented. So in collaboration with the city of Copenhagen, we developed an actual guidebook for the future of Copenhagen that illustrates what the city could be like in 2025. A guidebook that stresses the benefits from this plan – especially how it will improve quality of life for its citizens. The book is written as if it were a guide to an already existing city – as if the plan were already implemented. It includes how to get around, what you should see, where you should eat etc... Simply put, it visualises to the citizens what is actually going to happen to their city within the next decade.

I completely understand why a lot of city leaders are struggling with transforming their cities. That is why we believe the first important step is to get the citizens on board and explain what the transformation will mean to them. Explain that this is more than technical policy initiatives – it focuses on making their lives better. The quality-of-life argument is extremely important to stress, as it is the argument that the sustainable transformation of cities is profitable and will save everyone money in the long run.

JAKOB SCHOOF LAURA STORM

"Let's try a new approach. Let's not reproduce the same technical – and to be honest rather boring – long reports. Not a lot of the real change-makers – civil society and business leaders – who read these reports anyway. Let's try a more exciting, creative approach that engages people in the process."

Tell me a bit more about when and how your organisation, Sustainia, was founded. Why did its founders consider it important to have yet another organisation dealing with sustainability?

In the run-up to COP 15, the UN Climate Conference in Copenhagen in 2009, I was project director of a group called Copenhagen Climate Council. It was an international group that brought together business people, policy designers and scientists in order to develop ambitious recommendations for a new treaty that would replace the Kyoto Protocol. We wanted to make sure that political leaders would not be able to excuse themselves for doing nothing by saying businesses are not ready to act on climate change. After the disappointing outcome of COP 15, we tried to dissect what actually went wrong in the process. We conducted interviews with representatives from NGOs and businesses to get their views on the key stumbling blocks. Almost everyone we asked pointed towards the way politicians, industry leaders and scientist communicate about the challenges. We had not been able to make it clear to citizens and consumers that the sustainable transformation of our societies is going to be an attractive journey, something that they should look forward to and engage in. After all, sustainability is not all about turning off the light, about not taking showers, or wearing poor quality clothes. It is actually about a desirable and attractive life. This point was totally missed in all key communication leading up to COP15.

We therefore created a task force and set out to develop some principles on how business leaders should communicate their sustainability strategies and their sustainable solutions. Until then, the language that business leaders had used was full of technical terms and abbreviations that they had learned from the science community. For scientists it may be normal – albeit not ideal – to use very complex terms, but for politicians and business leaders it is quite unhelpful to adopt this kind of language without considering what it means to their citizens and consumers. So what we agreed on was: Let's try a new approach. Let's not reproduce the same technical – and to be honest rather boring – long reports. Not a lot of the real change-makers – civil society and business leaders – who read these reports anyway. Let's try a more exciting, creative approach that engages people in the process.

We then developed what we called the Guide to Sustainia, a publication that brought together the key points and lessons learnt from the thousands of brilliant reports out there that are hardly read.

We wrote about all these solutions as if they already existed in a nation that you could actually visit – the country of Sustainia. We wanted to highlight what an exciting world we could live in if ready and available solutions were implemented on large scale

JAKOB SCHOOF LAURA STORM

"I see no reason why my grandchildren should not be focused even more on health and sustainability than me, just as I am more focused on these issues than my grandparents were. We are also educating our youngsters to think about our planet in a much more holistic manner."

right here and now. In this regard, Sustainia is not a fantasy or utopia; it is a vision that builds on real and operating solutions only. It is realistic, in other words. We can do this.

This message of hope was important to us because, until then, the discussion on climate change had been too dominated by gloom and doomsday scenarios. We don't deny that we have a problem and that it is quite a substantial one, but without hopeful components in our rhetoric we don't think that our societies will be able to transform appropriately and in due time.

Following up on the notion of quality of life, would you say that this has changed over the last decades? Do we have a different understanding of the term 'quality of life' from our parents and grandparents?

The definition of quality of life has definitely become broader. I do not think my grand-parents even really used this term. Today, people don't merely want to 'get by' or 'make a living' in economic terms, but rather live a life that is fun and desirable. Health is also becoming much more important to people, both individually and for businesses and societies as a whole. This becomes obvious when you look at how our food has evolved over the past thirty or forty years, for example. We value our well-being much more than previous generations, and cities therefore have to offer their citizens much more than simply a home and a place to work.

When you look at generations younger thanyourself, do you think that this change in values will persist? I do. The evolution that we have seen in people's notion of quality of life makes me optimistic about the future. I see no reason why my grandchildren should not be focused even more on health and sustainability than me, just as I am more focused on these issues than my grandparents were. We are also educating our youngsters to think about our planet in a much more holistic manner. I know that this may not be true everywhere and for all children around the world, but in general, I definitely see this tendency.

The generational issue leads us to one of the main dilemmas in the discussion on sustainability and climate change. Quite often, the effects take place somewhere completely different, both in space and time, than the action that originally caused them. What are your ideas at Sustainia on how to close this gap in space and time? We focus a lot on making benefits and opportunities very tangible. We never argue that people should act in a certain way because of their grandkids and because the world has a huge problem. Instead, we primarily communicate what's in it for you, how can you create a better life for yourself today. It is so important to close the gap you mentioned that we cannot continue with catastrophic messages about something that will happen in hundreds of years' time. This is not something that most people will act upon.

The messages we communicate have to be close to people's hearts. Although it may not seem obvious, Sustainia is quite inspired by the communication strategies of global

JAKOB SCHOOF

LAURA STORM

companies like Coca Cola. It is amazing how they have succeeded in making sugar water so popular that it has become part of people's identity. Mind you, it is only sugar water! So, at Sustainia, we ask ourselves: how can we do the same with products that, you could argue, are more desirable and attractive than sugar water? How can we integrate sustainable products and solutions into an attractive lifestyle?

You focus mainly on highlighting tangible solutions and positive examples. But don't you also consider it necessary to occasionally put the finger on what goes wrong in order to avoid greenwashing?

Greenwashing is a great danger. If companies only stress the little they do that could be called 'green' but do not mention all their other activities that are potentially harmful to the environment, this will only confuse customers. One way to reduce greenwashing is to report about it in the media. Another helpful tool is independent international certification systems for companies, products and services. If you have the stamp of approval from an international certification organisation, this proves that you put your money where your mouth is, rather than just talk about sustainability to gain positive attention.

Some critics have also questioned whether Sustainia is just a fancy greenwashing campaign. But we do believe that we need to put the positive cases in the limelight. We don't at all support greenwashing, and the best practice examples that we point to in our reports are chosen according to clearly defined criteria that we have developed in collaboration with external experts. At this year's Rio+20 conference, we launched a publication called 'Sustainia100', where we collected100 best-practice solutions from all business sectors and all parts of the world. The examples that we chose all had to live up to seven criteria: amongst other things, they had to be environmentally friendly, scalable, and created in a collaborative effort. I think that transparency is the key to avoiding greenwashing and we try to be as transparent as possible in the way that we promote sustainable solutions.

You mentioned the collaborative effort as one of the seven criteria. Why do you consider this so important?

In order to transform our societies in a successful manner, we need to collaborate across sectors, cities, regions and nations, and we think that a solution will always be better if a variety of people have been involved in the process of developing it.

What do you consider the most important prerequisites for a long-term successful sustainability strategy in a city, one that will outlive election periods and political changes?

The key is the empowerment and engagement of the citizens. They need to feel committed, and we have to recognise them as an extremely powerful change-makers. After all, political decision-makers can only do so much. If they do not have the support of their constituency, they will not focus on environmental matters as important issues. But if citizens and the civil society are not aware of the magnitude of the problem and of possible solutions to it, they will not demand action from their political leaders. Therefore we see communication as an extremely important tool to raise awareness and make citizens want to get engaged in their local community.

Sustainia is active in both urban and rural areas, targeting both urban and rural communities. Where do you see the main difference between the two?

Currently there is a tendency in the sustainability discussion towards focussing only on cities. I do understand this tendency because the percentage of people world-wide who are living in cities is increasing year by year. We therefore need to focus on urban lifestyles and consider cities as laboratories that may show us how we can transform our whole planet.

Nonetheless, we also have to integrate the inhabitants of suburbs and rural areas in our approach. Many farmers, for example, may never have been interested in global warming until, all of a sudden, it affects their daily lives. This is happening right now in the US, where corn fields are drying out as the country is experiencing the hottest temperatures on record. Then all of a sudden climate change becomes extremely im-

JAKOB SCHOOF

LAURA STORM

portant to the farmers, and they start wondering how they can change their everyday life to do their bit towards ensuring their crops are not dried out in the future. So my point is that even though cities play a huge role as catalysts for change, people living in rural areas are change-makers as well.

Over and over again, sustainability experts claim that we don't lack the solutions that are necessary for a transformation of our society, but the political will to implement them. So how can political decision-makers be moved from knowledge to action? Again, I really do believe that citizens are the key change-makers and that there are limits to what political leaders can do unless citizens explicitly want them to. Consider the current presidential campaign in the US: neither of the two candidates really talks much about environmental issues because opinion polls have shown that these issues are ranked fairly low on people's list of political priorities. So why should the candidates include them in their communication?

In other words, communication and political agenda-setting always go both ways. Personally, I am a bit sick of the 'blame game' where it's always the other people that need to act. Depending on whom you ask, it's always the political leaders that are not doing enough, the business leaders that are only thinking about profits – civil society doesn't really care. How can we avoid this blame game and focus a lot more on how we can collaborate, and how each and every one of us can contribute positively to a solution of the problems that we are facing.

The blame game has, of course, to do with the fact that every group of stakeholders has its own specific interests. Have you found any arguments that all these groups will listen to? As I said before, a farmer who is not really interested in climate change will not listen until he is personally affected himself. I think it is hard to find arguments that everyone will react upon – that would be the equivalent to a political solution that satisfies everyone. And in many of the fields that we are discussing here, this kind of solution does not exist.

But wouldn't it be important nonetheless to establish a direct and meaningful dialogue between all these stakeholders?

Definitely, and if I were to mention one common denominator that is needed in this dialogue, it would be to realise that we are all just humans who want to live a better life. We should therefore be careful not to stereotype politicians or business leaders, or anyone else.

I experienced myself what this means before COP 15 in Copenhagen. Leading up to the summit, we hosted the business equivalent of the COP15 and gathered several hundred CEOs to discuss recommendations for a new political treaty on climate change. For a lot of environmental activist groups, this meeting made the alarm bells ring. Business leaders gathering to discuss something to do with climate change and the upcoming political negotiations - it can only be about how to lower the bar and how to lobby the process, they thought. So all of a sudden we - the organisers of the event - found ourselves on a 'hate list' of the global activist community. We wanted a dialogue with these groups to explain what we were trying to do to make sure they understood we had the same objectives but different means. We then invited some leaders of these activist groups to a dialogue with us and with some of the business leaders. The activists were all intelligent young people, and very outspoken. Eventually it all came down to the fact that business leaders are evil because they are making a profit. You cannot make a profit, the activists said - all of the profit should be reinvested in clean tech operations. I totally understand their arguments, and in a perfect world, it would be beautiful if it could be like this, but this is not how the world works.

So an understanding of everyone's background and value-base is truly needed to foster a dialogue. In this example we never got anywhere, because although everyone agreed that we had a problem, our approaches to solving that solution just weren't the same – and the activists could not get out of their framework of thinking of business leaders as bad people.

"Altogether, these initiatives can have a substantial impact. Just consider that some multi-national companies have 300,000 employees or more, plus the outreach to the employees' families. These companies have an extreme amount of power. Encouraging their employees to live healthier, more sustainable lives is also beneficial for the companies themselves."

What do you do to overcome this kind of stereotypes in your own work?

We do our best to gather as many stakeholders as possible – through our online community, for example. We reach out to business schools and business leaders, but also to other representatives from society. I also think that we are in a completely different situation now than we were only five years ago. There is a better environment for listening to others, as if people have finally realised that we will only move forward if we start to collaborate much better. This also becomes obvious when you read the mission statements in which companies outline their sustainability strategy: one point that they all mention is collaboration with the civil society. For some companies this may be just empty words, but I still consider it a good first step in the right direction.

You mentioned your collaboration with the business sector. How can companies contribute to making our cities more sustainable, other than through their products and services? Businesses have both the possibility and the responsibility to encourage their own employees to be change-makers. They can encourage them to live a healthier and more sustainable life by making it easier for them to make the right choices. Some companies offer their employees monthly passes for public transport, others have implemented programmes for exercise during the work day, and yet others focus on offering their employees healthy food in the canteen. There are numerous possibilities of what a company can do. Of course there are limits to this: employers should not tell you what to do or eat in your spare time, but for the work hours, they can declare it part of your job to be healthy. Other companies again pay their employees to be volunteer workers for sustainable community projects. So, for example, if I have an idea that I really want to carry out, but it takes a lot of my time, my company can allow me to spend part of my paid working hours for this volunteer work instead.

Altogether, these initiatives can have a substantial impact. Just consider that some multi-national companies have 300,000 employees or more, plus the outreach to the employees' families. These companies have an extreme amount of power. Encouraging their employees to live healthier, more sustainable lives is also beneficial for the companies themselves. A lot of research has shown that work efficiency increases if employees are healthy. So employees' health has actually become a business case for many companies.

JAKOB SCHOOF

LAURA STORM

At Sustainia, you regularly invite people from all over the world to submit ideas, thoughts and content to your publications. Why do you consider it important to pursue this open-source approach rather than collaborating only with a narrow elite of experts?

We believe that our problems are complex and thus call for complex solutions, which can only be developed if we involve all key groups. There are too many elitist groups already. We take it very seriously that citizens and civil society are the actual changemakers, and we use our online community to test new ideas, to find out about consumer preferences and to make decisions. This is not an easy process—it is very much learning by doing, but we are dedicated to engaging a wide variety of people.

Do you think that political decision-making should also be based on such participatory processes to a greater extent?

Sustainia is not a political organisation so we don't focus on making political recommendations. Personally, however, I consider this to be absolutely necessary. Modern technology would allow us to make it much easier for the individual to get engaged, to make suggestions and to have their say in political processes, but our society hasn't yet really figured out a way to do this efficiently.

You briefly touched upon the fact that understanding each other's values and aspirations is a prerequisite for meaningful dialogue. I can imagine that this can be quite a challenge for a network like Sustainia, which aspires to operate on a global scale. To what extent are peoples' aspirations in life, the challenges they face, and their attitudes towards sustainability, different in from one part of the world to another?

I think that people's notions of quality of life are more similar than many would believe. It is very much the 'near' values, those that are close to our everyday lives, that are important to most people. But, of course, the challenges that people around the world are facing differ a lot. A guidebook to Copenhagen in 2025 is not really relevant to people in India. Every city and every country needs to develop its own approach, and combine the available solutions in its own specific way.

If you look at the years ahead, what change in the world would you like to make through your work with Sustainia?

I would like to get more people to talk to each other, and to provide a platform that enables people to co-create visions for an exciting and sustainable future. I have high hopes that we will be able to gradually close the gap between vision and concrete action. So turning dreams into reality – to be very modest – is something that I hope to contribute to, both personally and through the work of Sustainia.

## CHANGE MAKERS

## CONDUCTORS OF CHANGE

Conversation between Brian Edwards and Albert Dubler Architects are predestined to coordinate the sustainable transformation of our cities, says Albert Dubler, President of the UIA (International Union of Architects). But far too rarely are they given the chance to assume this responsibility. Good architecture can indeed improve health and the quality of life everywhere in the world; the reason being that, more than any other discipline, it is able to satisfy the material and also non-material – social, cultural and aesthetic – needs of human beings.

**Albert Dubler** is the president of the International Union of Architects for the 2011–2014 triennial period. In 1988, Dubler set up an architectural practice in Strasbourg, France and has since focused on sustainable architecture, timber construction and refurbishment. Prior to being elected UIA President, Dubler served as a member of the Council of the French Order of Architects (CNOA). He became a UIA Vice-President in 2008.

**Dr Brian Edwards** is Emeritus Professor of Architecture (ECA – Edinburgh University). Until 2011, he held the position of Associate Professor in Sustainability at the Royal Danish Academy of Fine Arts, School of Architecture in Copenhagen. Edwards has researched and published widely on green issues in architecture and urbanism. Some of his publications include *Rough Guide to Sustainability, Sustainable Architecture and Green Buildings Pay.* 



#### ALBERT DUBLER

BRIAN EDWARDS: Mr Dubler, as president of the UIA you represent 1.4 million architects, which is one person in 5,000 in the world if my arithmetic is right. Would you say that the UIA, therefore, has access to Government to a far greater extent than single, national architects' chambers; particularly to overarching organisations like the European Union, the World Bank and the WHO?

ALBERT DUBLER: It really depends on the country. But in international conferences, we can surely make our voices heard. When we attended the 2009 UN Climate Summit in Copenhagen, and Louise Cox, my predecessor as UIA president, was queuing to get into the conference, somebody asked her, "What are you doing here?". She answered, "Tm an architect. We are responsible for 40% of greenhouse gas emissions and 40% of energy consumption."

And 40% of the world's resources, if not more, if we think of all the minerals and aggregates and all the other things that go into construction. There are a lot of issues that architects possibly need to take a bit more interest in.

They do. But it is not always easy to distinguish the useful initiatives from 'green-washing'. In France, for example, we have an association called HQE, Haute Qualité Environnementale, high-level environmental quality. It was founded in 1996 and we – the French architects' chamber – were initially a part of it. But we left the association in 2003 because we considered HQE was becoming a kind of 'green-washing' process, since it was largely dominated by the building materials industry.

I know people are quite rude about greenwashing. I take the view that it is the first step; if we don't go through green-wash we won't be able to go through a 'deep green' a bit later. Yes, but we should not let it become green racketeering.

Green racketeering is back, but I don't think we can expect a green revolution overnight. It is a step-by-step process in which we have to make sure that we do not just stop at green-wash. It is the first layer, I think, of a wider cultural change; to at least acknowledge that green matters. When I was a young architect, clients weren't at all interested in green issues. So green-wash is a start. But to get back to your impact on government and international organisations once more: does the UIA have any interaction with other international groups that work in the field of urban sustainability, such as the WHO or the C40 Cities?

The UIA has the status of a NGO at the UN, we are partners with UNESCO, and were accepted as observer to the WTO a few years ago. We are also involved with UN Habitat and are part of their new campaign, the World Urban Campaign.

Furthermore, I was invited to the United Nations in April this year by the Prime Minister of Bhutan to talk about happiness in a so-called High Level Meeting with the President of Costa Rica, as well as the former Prime Ministers of Chile and Australia. As you may know, this country is planning to shift from Gross Domestic Product (GDP) to GNH, Gross National Happiness, as an overarching measure of prosperity. This is a very interesting approach, I think.

The next day I attended another meeting in New York, focusing on more practical aspects of the issue. One of the outcomes was to say, before drawing big ideas, we have to achieve the millennium goals and eradicate poverty; everybody has to eat, because if you're not well fed you lose your skills. This is very important, and I think we have to keep it constantly in mind.

And if you're not well housed, and don't have good water, or good education. I know the Millennium Goals are admirable, and I used to think that they were aimed at Africa and parts of Asia – but in fact, increasingly, I think they are global.

They are everywhere. Do you know how many homeless people there are in Paris?

No.

I heard the number 40,000. And the social services in Paris take care of another 15,000; It is terrible.

"Yes, because we architects were the first to talk about holistic approaches to sustainability, and the Millennium Goals are part of what I consider a holistic approach. Quite often, architects are the only ones who can bring people and communities together."

Doyou consider the millennium goals an issue that the architectural profession should be more engaged in?

Yes, because we architects were the first to talk about holistic approaches to sustainability, and the Millennium Goals are part of what I consider a holistic approach. Quite often, architects are the only ones who can bring people and communities together.

As a conductor if you like.

Yes, as facilitator or conductor. To give you an example, I recently stayed in Rio de Janeiro for nine days, visiting a project in a favela called the Morro da Babilônia. Like all favelas, it was built without any plan and without property rights on an extremely steep site, which is very difficult to build on. Some people were living there inside a forest, which the city administration wanted to protect. It took the stakeholders of the project some time, but collaborating with the city and the local community, they managed to convince everybody that those living in the forest should be relocated to newly-built homes that were financed by the government. I think this is a very good result because the decision was collective and it was an inclusive decision that was made by architects collaborating with the municipality and locals.

Yes, I think this shows the interconnectedness of so many decisions. When we design cities we also have to think about eco-systems and protecting delicate areas like the rain forests. There is a whole lot of connective tissue; as architects, we often just see the building and the materials but we don't think about the full chain of material resources and disposal. So, ultimately, what do you think are the triggers for change in cities?

One of the positive outcomes of this year's Rio + 20 conference was that, for the first time, it stated that civil society is important in all the processes.

The first time?

It had not been said before. This can lead our profession to say, "We are proud of our part of the process, let's be the leaders." Or, at least we ought to say, "It's not the government alone who has to provide regulations and similar things, it's everybody's job to assist in the process."

I experienced this when I was invited to Manila in 2010 to be part of a competition jury. The theme of the competition was to design "against the elements", and we changed it to "design with the elements". 40% of the urban population in Manila live in so-called 'informal settlements'. The physical thing you see in those informal settlements is that they don't have windows; they have no daylight.

"Before becoming an architect, I took a Master's degree in sociology. I have never worked as a sociologist, but while training for sociology, I learnt something that is still very useful to me: when I want to hear people's advice or opinions, I just let them talk and I listen to what they have to say."

They just have outdoors.

Because their homes are built with walls of corrugated iron and similar materials, whatever they happen to find. The man who launched this competition had a brilliant idea. He discovered that the sewage system did not work because of waste. And they started to collect waste and found millions of plastic bottles ...

Which is a resource...

Yes, so he used these bottles to bring daylight into the homes. He drilled a hole in the ceiling and inserted the bottles, with just some rubber tubing around them, and filled the bottles with chlorinated water to prevent fungi from growing. So that is how he brought daylight in the buildings to become much brighter than even one of the old 100-Watt bulbs.

I think that shows the power, not just of windows, but of daylight – and of invention.

And it results in human dignity, which is very important.

Human dignity is very much a social sustainability issue. We spoke about 40,000 homeless people in Paris: they have no dignity, they sleep in the subways. I am wondering how we can build dignity into city-making in the future?

We seriously have to consider this. For World Architecture Day last year, we – the UIA – had the theme Architecture as a Human Right.

Not just buildings, if you like, but architecture.

Architecture is the next step to buildings and we are probably the only ones who understand its value. At least this is what we tend to believe. But if you look at how people react to architecture, then you have to admit that everybody understands architecture in a way, if it is strong enough. In 2002, for example, at the UIA conference in Berlin, I was with around 25 to 30 American ladies, all of them around 50-60 years old, who just didn't stop talking. They only stopped talking when they entered Libeskind's Jewish Museum. As soon as they entered the building they became silent.

Was it because of the power of light?

No, they felt the strength of the architecture, there was nothing in the museum; it was empty. Of course this is not everyday architecture, I do admit it is probably a rather strong example.

#### ALBERT DUBLER

That point you made about daylight as a kind of force for change in cities is really important. I hadn't thought about it before, but in the slums I visited in different parts of the world there was a lack of light – not just daylight inside the buildings, but a lack of light, sometimes also in the public areas – because of the density of development.

I live in a relatively small town, Strasbourg. Until the end of the 1980s, Strasbourg had permanent traffic jams. Today, I have my office very close to the railway station and I live on the other side of the city. In the morning it takes me half an hour to walk to the office; in the evening it takes far longer because I meet people. By contrast, when I travel by car during the day, it also takes half an hour, whereas by tram it takes 14 minutes, and by bicycle it takes 12 minutes.

One other thing I noticed about daylight is that you can get much more daylight through the roof than through the walls. As cities get denser, the roof gets to be much more active and much more interesting, not only from an energy point of view, but regarding daylight as well. That is important.

But let me move on to the question: what are the triggers for change? What kind of qualities do you think future cities need to have?

That does suggest that infrastructure is really a key ingredient.

In frastructure, but also size, scale. Size and scale are really important.

This includes the size of the pavements, which I always find far too narrow. When you think of how much space a motorist has with one person in a car often, or a taxi, and then how little space the walkers have. It is a question almost of democracy of urban space. I think walkers have only 8 or 10% the amount of space per capita compared to other users, particularly car users. Cyclists get a bit more sometimes if they're lucky.

Conflicts often arise around the question of space. In Strasbourg, people with bicycles tend to become very arrogant towards pedestrians.

I also discovered that when I lived in Copenhagen for three years.

It is a matter of learning to live together. In a part of Strasbourg, for example, there are two streets with trees down the middle. On one side, there is space for cars in both directions and on the other side, the space is shared between pedestrians, bicycles and the terraces of the adjacent bars. So people on these streets simply have to try and learn to live together.

Itake the view that if architects would focus a bit more on infrastructure – which traditionally is the area of urban planners and engineers – we will get more human cities, more liveable cities. Is that your view as well? Of course, yes. As you have lived in Copenhagen, you will probably be familiar with the work of Jan Gehl?

ALBERT DUBLER

I am indeed, and I'm a great admirer of his ideas; his practice itself is a generator of new concepts of urban living.

He once said Copenhagen has been lucky because they had a brilliant traffic engineer who said that it's not possible to have any more cars in the city, and who took the logical consequences not to try to improve the situation... Something similar has happened to Times Square in New York; if you look at it nowadays, without any cars, it is fantastic. It is amazing what can happen to a street or square if you take something away that used to be there. In the autumn of 2011, we had the UIA World Congress in Tokyo and, not too long after the tsunami on 11 March, I went there for a preparatory meeting. On that occasion, I visited Ginza, which is the Champs Elysees of Tokyo – where all the luxury shops are. For the first time I saw the buildings – because there were power cuts. Otherwise you never see them due to the advertising lights.

Some Asian countries, particularly China, have recently invested a lot of resources into infrastructure, such as high-speed trains, urban metro systems, urban parks and eco-towns. Do you see lessons for the West in the way China has handled its urban growth?

I visited the satellite towns around Shanghai in 2005. They incorporate a lot of brilliant ideas, but you can't transfer these directly to Europe. When the Chinese government decides something, there is no discussion or opposition. In our Western countries, things are very much different. No one is able to build a city for 500,000 people in two years here in Europe.

Our idea of incremental, gradual growth, is something quite alien to the Chinese. In their rapidly expanding economy they have chosen an entirely different strategy. It appears to me that there can be no global, over arching pattern of urban growth, but that future cities need to grow from their local bases, from the culture, the climate, the traditions.

We can learn from certain architects – like Wang Shu, who just won the Pritzker Prize. Their example shows us how to develop an architecture rooted in local traditions, built with local materials. But they do not represent the mainstream of Chinese architecture.

When I speak to representatives of leading international design practices who work in China, they mention the benefits of the speed of construction, the ability to bring about change without too many compromises. But that clearly is not going to be a solution we can import back into Europe or Africa. I'm thinking particularly about Africa, with its huge problems of poverty and of ill health, overpopulation, resource scarcity and wars. Is it possible to migrate a set of ideas into that continent?

To a certain extent it is. But you still have to carefully consider the local conditions.

When I was in Rio de Janeiro for the Rio + 20 conference, I saw a documentary film, The Man Who Stopped the Desert. It tells the story of a shopkeeper in Burkina Faso, who decided one day to sell his shop, move to the countryside and become a farmer. He had to face huge problems because of desertification. Nothing grew on his fields – until he looked at traditional farming methods in Burkina Faso. He tried planting many things and some did grow, but not all of them. After 20 years he had grown a forest. His achievement was considered a great success in terms of the rehabilitation of farmland and the regrowth of forests and raised attention from international media and non-profit organisations.

This film inspired us to set up a collaboration with IFLA, the International Federation of Landscape Architects, and work on this topic. We have to consider soil, agriculture of soil, as a resource around the cities.

And in the cities. Because there's a big interest in urban farming these days, using city roofs and city balconies to grow food.

Yes. Improving agriculture is a means of avoiding poverty in rural areas and thus preventing even more people from migrating to the cities. In the cities, it is a resource for food supply and increased biodiversity – because for some species, cities have become the only place where they can survive.

"Our five additional criteria include 'society,' 'the environment,' 'technologies,' but also 'financing the building process' and 'preparation to research'. This is something we are lacking: there is poor research in architecture compared to other disciplines."

When I look at the sustainability debate over the last tenor twenty years, we started off with energy, because we had a scarcity in the 1970s as well as global warming; but we broadened it to include water and other environmental issues and then went on to look at entire ecosystems. Now we are considering health in cities and how it interacts with energy and other issues. As you mentioned, we are now also starting to look at soils.

Considering the skills that architects typically have, do you see us as lacking an understanding of how we could exploit some of these areas to create a change towards the better?

You also need several professional viewpoints, not only from architects but from players with different backgrounds.

Are you concerned about the education of architects, about us being too focused on the individual building and possibly too much on the technical areas of construction? Do we need new skills and new outlooks in our profession?

No, I think if you talk to architects you cannot say that. As early as 1993, we published the Declaration of Interdependence for a Sustainable Future at the UIA World Conference in Chicago. So architects have been aware of the fact that sustainability concerns not only energy for a long time.

It is also a question of collaboration. When you work alone in an office, you often tend to be very narrowly focused. The more people there are in your office, the better. So probably we should advise our young colleagues to work together as much as they can, because as soon as you have three or four viewpoints you have more ideas. To develop a holistic approach you need several viewpoints; it is as simple as that.

Before becoming an architect, I took a Master's degree in sociology. I have never worked as a sociologist, but while training for sociology, I learnt something that is still very useful to me: when I want to hear people's advice or opinions, I just let them talk and I listen to what they have to say.

Of course we need changes. The curricula of architectural education in Europe are based on the EU Architect's Directive. It was first introduced in 1985 and was changed four years ago. Article 3 of this directive comprises 11 criteria, whereas the UIA operates with 16. Our five additional criteria include 'society,' 'the environment,' 'technologies,' but also 'financing the building process' and 'preparation to research'. This is something we are lacking: there is poor research in architecture compared to other disciplines.

#### ALBERT DUBLER

The last two criteria interest me particularly. Through research, we can get a better feeling about the shape of future cities. If we don't do research, we are working only with existing knowledge, which is clearly inadequate to deal with 9 billion people on Earth within the next 20–25 years, with all the problems that this entails.

We are both in our sixties now and have been trained with a social model that does not exist any longer. We now need to design buildings that are far more adaptable. It has always been a dream of architects to design what Corbusier called the "machine à habiter". But there is very little research on how to make buildings adaptable, endurable and sustainable purely through design.

There is quite a lot of research money available for new technologies, building physics and, to a degree, the eco-systems of cities, but there's far less funding available for research into design strategies. The power of design to engineer better solutions with fewer resources and more quality of life is rather neglected by people that fund core research, such as government agencies and the European Union.

I think the possibility does exist if you see how European funding works. But it has to be the architects who apply for it, otherwise nobody else will. We have to actively ask for it. The UMAR, the Mediterranean Architects Association, for example, managed to receive funding from the European Commission to work on design just a few weeks ago.

What limits the power of architects to better shape the future? Is it lack of knowledge, lack of vision, lack of money or lack of networking?

All of those things, I think. Firstly, not working together is the biggest problem, because when you are alone you are not powerful. One of my teachers told me when I was in the first year of school: having an idea is 5%, nurturing the idea is 10% and convincing everybody that this is a good idea is 85%. I think that this is the core of the problem.

But to be able to convince people, we need our buildings to have a strong message and good values; we need them to be examples. We also need our journals to explore these issues more clearly, and we need to engage more with the media in general, to get across some of our thoughts in order to influence policy-makers and people with money to actually invest in better solutions. Yes, of course. But not all the architects can have offices on that scale. Nonetheless, I remember a discussion I had with a friend and colleague about ten years ago, who told me that he collaborated with specialists on all sorts of issues. Whereas I was working alone at that time, trying to improve my own skills one topic at a time. I was probably wrong.

Do you see the practice of architecture changing in this respect? Some of the big practices like Skidmore, Owings & Merrill or Foster and Partners now employ a lot of non-architects in their teams already, who work on specific areas.

In Britain there has been a survey of practices that shows that there is a drift towards bigger and bigger practices, as well as small studios with one or two people. What is shrinking is the middle ground. The future challenges that we are facing, and the strategies we need, probably require big teams.

Yes, big teams and the means to clearly explain ideas to everybody. We need good examples as they usually help you to do good things yourself.

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Asmallteam with a very good idea could be better than a big team with an average idea. This is the working principle of people like Jan Gehl and it was the principle of many of today's big architects when they started their practices.

When I was at the UN in New York, we discussed the question, "How can you be happy when you feel guilty?" You feel guilty when people can't eat, don't have food, when they don't have a good standard of living. When you are happy with your work and you are able to put sufficient time and effort into it, you are capable of achieving the best results.

You probably know the English philosopher Alain de Botton. He wrote the book The Architecture of Happiness, which is very much along the lines of what you said. There is a sort of architecture that makes us happy but reduces our guilt about the people who aren't so fortunate. De Botton argues that what we want more in design is to be happy. Possibly the future of happiness in architecture, and aspects like daylight, should be a central part of our efforts as architects.

Sure. Silence is really important - and light, and birdsong and laughter.

We have spoken about the growth of cities in our conversation, but there is also an increasing number of shrinking cities worldwide. Glasgow, for example, used to have over a million inhabitants and has now shrunk to about 800,000. I would argue that cities probably get better as they begin to get smaller and their problems become more manageable.

Have you visited Vienna in Austria?

I visited Vienna last year, yes.

At the beginning of the 20th century it had 1.8 million inhabitants – and in the 1970s only  $1.3\,\mathrm{million}$ .

### ALBERT DUBLER

I know that people worry about shrinking cities. They worry in the north of England about Leeds, Manchester and Newcastle shrinking with industrial decline, and about people moving down to London, which, of course, is growing. I think, though, that the quality of life for those left behind has actually improved with the stabilisation of the cities.

I'm not sure that it has improved in Detroit.

Maybe it will take a little more time because some of the ecological initiatives don'thappen overnight. Nature takes time to heal the cities, to allow for the qualities we are talking about to evolve.

Important to healing is the notion of life... One of the next things we should definitely do as architects is to have a closer look at nature. This is what bio-mimicry does.

What is wonderful about nature is that it recycles all its waste. Discarded material becomes the building blocks for a new structure and a new beauty. Nature moves towards beauty and diversity and I think our cities need to do that as well. But it takes time, often centuries, as in Paris, for example. It is hard for new cities to build an ambience with nature but old cities can do it.

In new, growing cities, you face problems you could not have thought about at the beginning. Consider the example of rainwater. Drainage harvesting does not work once a city becomes too big – but once you replace concrete and asphalt with more porous materials it works. At the same time, you get plants in the city and more birds again.

So we ought to work closely with nature and understand that cities and nature are connected rather than disconnected. I think the idea of green belts around cities, rather than infinitely expanding cities, results in the interconnectedness with nature becoming so much more evident.

I agree. The beauty of nature, even wilderness, in cities, has truly been rediscovered during the last 20 years. I consider this great progress.



