

VIEW

Global Expert Dialogue Series

Urban Topics under the COVID-19 Pandemic



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**Urban Topics
under the COVID-19 Pandemic**

西浦城市与环境校级研究中心

XJTLU URBAN & ENVIRONMENTAL STUDIES UNIVERSITY RESEARCH CENTRE

China · Suzhou

PREFACE

2020 has been an extraordinary year. The COVID-19 has swept the world, leaving a deep imprint in the hearts of hundreds of millions of people. By December 23rd, the total number of new cases in the world has exceeded 78 million, still without a clear sign of overall containment. What's more, experts have stressed that it is necessary to prepare for long-term coexistence with the virus. In a time when information exchange and transportation mobility are extremely convenient and the inter-dependence between human beings reaches an unprecedented level, the spreading risks of non-traditional security threats such as major infectious diseases has also reached an unparalleled speed and scope, regardless of country, race or degree of development. This largely greatly increases the uncertainty in the world and becomes a great challenge facing mankind together. Encountering this sudden major test, in addition to fighting the virus against the clock, we also need to gather wisdom and strength from all aspects, and promote global cooperation and mutual support, so as to think quickly in the crisis, make firm progress in reflection, and grasp the future in action.

As the world enters the urban era, the higher spatial density of population and agglomeration of industry accelerates the spread of the virus. However, it is also worth noting that advanced ideas and multiple resources are also converging in cities, and more innovative strategies and solutions will be produced in cities. The importance of the city has de facto been pushed to a new high, and the sustainable development of the city is our common and urgent goal. Every major crisis in human history has constantly proved and reminded us that while rapidly reducing negative impacts, active adaptation, recovery, prediction and changes are the key. It requires us to act decisively at the moment, based on our imagination of the future, so as to turn crisis into opportunities. The *UN Habitat 2020-2023 Strategic Plan* further emphasizes the need to achieve key changes in the new context, and pave the way towards shared prosperity, better quality of life, low-carbon development and resilient development.

The University Research Center for Urban and Environmental Studies (UES) of the Xi'an Jiaotong-Liverpool University focuses on the environmental, economic, social and health changes brought about by urbanization, and explores a more intelligent, sustainable and high-quality development paradigm. Since February 2020, it has invited 12 international scholars, experts from international organizations and urban management practitioners in Asia, Europe and America to establish dialogues, share views and explore paths in the form of Questions and Answers, which has been released to the world via online platforms in both English and Chinese throughout the year. Among which 11 Dialogues (in English) have been now compiled together, covering comprehensive topics related to healthy city, community governance, smart development, economic recovery, urban resilience and so on. Incorporating varied fields such as the urban planning, spatial design, governance approaches and technological breakthroughs, the future development of the cities is conceived in a diversified and forward-looking way. Facing the common destiny and challenges of mankind, and combining both international vision and local depth, this global expert dialogue series is aimed to collide with new thinking and contribute to the development of healthy, livable and sustainable cities.

Dr Yunqing Xu
Director, University Research Center for Urban and Environmental Studies
2020.12.23

ACKNOWLEDGEMENT

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TOPIC I : COMMUNITY WELLBEING

GUEST Dr Janaka Jayawickrama

Dr Janaka Jayawickrama is an Associate Professor in Community Wellbeing in the Department of Health Sciences, University of York, UK. He is a social anthropologist, and has worked within and between academia, policy and practice in disasters, conflicts and uneven development. He has played key roles in various humanitarian responses including tsunami responses in Sri Lanka (2004), internally displaced people in Western Darfur, Sudan (2005 - 2006), Afghan refugees in Pakistan (2006), refugees in Malawi (2006), Iraqi refugees in Jordan (2007- 2008) and Syrian refugees in Northern Iraq (2017 - ongoing). Dr Janaka continues to advise the UN and International Agencies on humanitarian affairs. His pioneering work on concepts of care and wellbeing has influenced the policy and practice of the global humanitarian and development intervention discourse.



➤ INTRODUCTION

The outbreak of COVID-19 has always drawn concerns of the population across China. As a public health emergency recognized by the World Health Organization, it has also attracted widespread attention from the international community. In addition to the fight against the virus, it is also particularly important to actively sum up experience in the crisis, learn lessons, and think forward for a better future. Many topics are worth discussing, such as people's physical and mental health issues after the crisis, the improvement of the living environment and the quality of life. It is also important for us to figure out how to quickly resume production, consumption and economic vitality, while balancing the environment and ecology. By looking for innovation power in trials and transitions, we could enable cities with higher crisis response capabilities and higher quality development through planning, policy, and governance reforms. UES is committed to paying attention to issues about economy, society, demography, and health changes brought about by urbanization. Relying on the international platform of Xi'an Jiaotong-Liverpool University, this column aims to invite a series of international experts in related fields to participate in discussions, facilitate dialogues, and share their views on issues of concern to us. From a diversified perspective, we would expand horizons, collide with new thinking and finally contribute to the development of healthy cities.

01 What do you mean by wellbeing and why is it important to communities?

Through my experiences of working with disaster and crisis affected communities in Asia, Africa and the Middle East over the last 25-years, I am defining wellbeing as the individual's ability to effectively engage with uncertainty and challenges of life.

When we look around, we realise that life is dangerous and uncertain. I am not just talking about disasters or big crises, but even in general and day-to-day life. Rising house bills, road accidents, broken relationships, sudden illnesses and job losses are reminding us how tentative our lives are. In this, communities in many societies have developed very sophisticated yet pragmatic approaches

to deal with these uncertainties and dangers. Since the beginning of human civilisation, we have been dealing with all these challenges, so some of these approaches to wellbeing are time-tested and proven. Our religions, relationships, families, traditions and spiritualities are all part of this.

So, in my perspective, community wellbeing is a process that we deal with external life through our internal understandings of them and finding our abilities within.

02 What are the main challenges to wellbeing in urban settings, especially when cities become larger and clustered?

The urban, especially big cities can be defined by fast-

phase, resource heavy, individualistic and extremely busy lifestyles. I always find interesting to see that in big cities like London, people look very unhappy. They are too busy running, do not have time to even smile with each other. What we can generalise here are three things:

i. To live in a big city, you either have to be very wealthy or you are commuting a huge distance to work in the big city.

*ii. Your work mainly keeps you in the city. You cannot be unemployed and maintain a city life. So, **your life revolves around your work and nothing else.***

*iii. Due to your busy lifestyle, there is no space for your relationships, hobbies or even just not doing anything. **While you do not have time to care for others, no one has time to care for you.***

In this, one can live a very lonely and isolated life in the city, which has a major impact on their wellbeing.

03 What are the main psychological impacts of major disasters such as COVID - 19 for both frontline doctors and community workers, and the general public even though the physical ailment would be cured?

When you are a medical professional or community worker, your aim is to help and care for affected individuals and communities. Not just in COVID-19 situation, but in any crisis, the caring professionals are also relatively helpless and powerless to save everyone. When you realise that, it can be a big shock. Even in this realisation, when you see a lot of suffering of your fellow humans and witnessing them dying is a huge mental challenge. **These memories can trouble you even in the long-term. That is why it is important that the people who are in caring professions seriously needs to think**



Figure 1 A community worker in Wuhan is disinfecting the neighborhood after the COVID-19 outbreak. (Source: Internet)

about their own wellbeing.

In terms of the general public, it is the challenge of not knowing what to do. These days with internet and social media, we find many commentaries of situations without proper understanding. In these reactions in social media or internet can be very problematic. At the same time, social media can bring people together and build solidarity among affected people. As I mentioned before, realising how uncertain and dangerous our lives can be very discouraging. That is why after a major crisis, **encouraging people to take control over their routines again can help.**

04 What is localisation of disaster assistance and why it is important?

In any crisis, the affected populations are the first responders. We generally think that the professional service providers make the first interventions, it is actually **mothers, fathers, our neighbours and friends are the first responders.** In most crisis situations, to recognise this and establishing collaborations between the affected community and professional services is what we need. The importance of this is that **having a population that is willing to respond to a crisis in a positive manner help the professional assistance.**

05 What should be the main focus of post-disaster citizen assistance and future risk-reduction?

There can be many things that can be done to strengthen communities and future risk-reduction. However, in my perspective, education play a key role here. I am not just talking about formal school and university education but including the **informal and non-formal education about disasters and crises.** When everyone understand that we all have a responsibility reduce risks, then we can effectively deal with crises. Further, **the communities can own their risk reduction processes,** which is very important in relation to mitigation of future crises.

06 What are the methodologies of establishing new knowledge foundations that improve community wellbeing and health?

I think that we are only focusing on the new scientific knowledge in dealing with crises. However, we sometimes forget, the **ancient knowledge foundations such as Ayurveda and Chinese Medicine have much advanced interventions and practices.** I think that

the **new knowledge and ancient knowledge needs to collaborate as equal partners**, so that we can establish new knowledge that are relevant and effective in improving community wellbeing and health. In my research and practical work with crisis affected communities, I always try to bring the new scientific knowledge and traditional knowledge together, so we can develop new methodologies and frameworks. We need to remember that Daoism, Confucianism, Hinduism, Buddhism as well as ancient philosophies from many other civilisations can shed some light into contemporary challenges.

07 **How do you comment the measures taken by China on COVID-19 so far?**

As an outsider who is looking at what is happening in China is through my readings. So, this is an outsider's view. It is quite impressive that China is doing all what can be done in this juncture. Compared to previous crises like SARS, the response to this crisis is much more advanced and relevant. I do not think that anyone can plan 100% to prevent or respond to a crisis like this. What

I see is the **flexibility and willingness to learn from this experience**, which is admirable. It is always unfortunate to see human suffering. These are times to gather the courage and patiently persist with the efforts to deal with this situation. We need solidarity and support for everyone that are suffering from this crisis.

In terms of future, we need to learn from this crisis and experiences of the responses. I think, when this crisis is over, China could establish this experience as a case study – not only from a scientific perspective, also from a social, cultural and environmental perspective. Chinese cities are growing, and urban wellbeing and health is becoming an important aspect in that. Further, I think that **training future humanitarian professionals that suits the social, political, cultural, economic and environmental context and needs of China is a significant investment for future**. Universities and higher education institutes within China should think about this.

As Confucius, one of the greatest Chinese philosopher and politician of the Spring and Autumn period said, ***our greatest glory is not in never falling, but in rising every time we fall.***



Figure 2 After COVID-19 outbreak, Huoshenshan Hospital was built in Wuhan for centralized treatment of patients. The hospital was designed and delivered just in 10 days. (Source: Internet)

TOPIC II : PREDICTION MODELLING

GUEST Dr Yi Zou

Dr Yi Zou is a Lecturer at Department of Health and Environmental Sciences, Xi'an Jiaotong-Liverpool University. He received his Ph.D. from University College London, and worked as postdoctoral researcher at Wageningen University in the Netherlands. He was awarded as the "Jiangsu Province Innovation & Entrepreneurship Talent Program" and "Outstanding Educator of Suzhou". His research interests include landscape ecology, biodiversity, insect pollination and biological control services. He is teaching Research Design, Global Change Ecology courses.



➤ INTRODUCTION

After the outbreak of COVID-19, various kinds of information and rumors about the trend of the epidemic as well as the epidemic prevention methods have emerged one after another. A group of staff members from the Department of Health and Environmental Science in Xi'an Jiaotong-Liverpool University quickly collaborate to build a model to predict the development trend of the epidemic situation across the country and provinces, and visualize the results on the online platform. At the same time, it opened up a special area for data download and Q&A about the rumors. It had received 200,000 visits from more than 110 countries and regions in less than three weeks since the establishment of the platform. This platform is not only conducive to the real-time sharing of global scientific research information but also helpful in transforming digital modeling and scientific knowledge into science information accepted by the general public, which completes a meaningful "crossover". In order to understand the role of university research teams in the prevention and control of the epidemic and to build a platform for such "cross-border" communication, UES invited Dr. Yi Zou to share with us how to grasp the epidemic through rational prediction. And starting from the perspective of biodiversity protection, we would reflect on the internal rules of better respect for the ecosystem.

01 After the outbreak of the disease, you have quickly assembled a team, built a website, posted the prediction charts online and made the raw data open for public. So what is the original intention of this action?

There are numerous news and resources about the novel coronavirus. Sometimes it is difficult for public to pick up the key information, and to distinguish rumours.

We created the website to provide open access data for scientists, journalists and other researchers to access, as well as daily statistical modelling.

In the Chinese version of the website, we also provided evidence-based answers to myths and rumours. All these information are obtained automatically from government



Figure 1 Website platform page (Source: <https://nCoV2020.org/>)

websites and public medias and updated every half an hour.

We hope that through the integration of information,

public can quickly get latest news about the infection situation at different regions and distinguish rumours, while scientists can use the data to conduct other analysis. The website has received more than 200,000 visits, we hope this website can provide more people with data sharing and fight the epidemic together.

02 What is the mechanism and parameters of the model, and what do you think is the most important factor that bringing the disease under control?

The basic assumption is that the growing of the infection fits the logistic regression model, which is commonly used for **population dynamics and epidemiological analysis**.

This means, there will be an asymptotic value for the total number of infected people. The curve looks like a stretched version of the letter 'S', where the top of the curve indicates the maximum number of cases.

While the model does not judge factors that influence the current infectious situation, apparently to some extent to **restrict people from gathering together is an effective approach**.

03 Is the trend of the epidemic in these days consistent with the expected results of the model? And why?

The model indicates that active infections in China was declining since the 12th February. So far the **current situation still fits the model well**. As you may notice from official reports, each day more people get cured than infected, and many provinces have reported no new

infection case. This is a good sign, which indicates that the current situation is under control.

However, a mathematical model is not a direct window to the future. There were many factors that could influence the model. For example, if **factors that affect the trend change or if the data on current cases is underreported**, then the model's indications will not be accurate.

04 Disease experts mentioned that this outbreak originated from the fact that the virus crossed the boundary between animals and humans. As an expert on biodiversity, what do you think about the relationship between humans and nature? Is it possible that we not cross boundaries and live in harmony?

We human beings as a part of the nature, belong to the ecosystem. While ecosystem as a whole, its networks are elaborately maintaining its balance. And biodiversity is the intrinsic unit of these networks.

Each species has its unique role in the system; **they may fight with each other, but also restrict each other from outbreaks, and provide complementarity functions for each other**.

We have to admit that humans are a very successful species. We benefited from ecosystem services. Sometimes we remove resources faster than replace them. However, we have to be very careful **not to break the ecological balance**. It is important to conserve biodiversity, to respect the nature, and live harmoniously with other creatures.

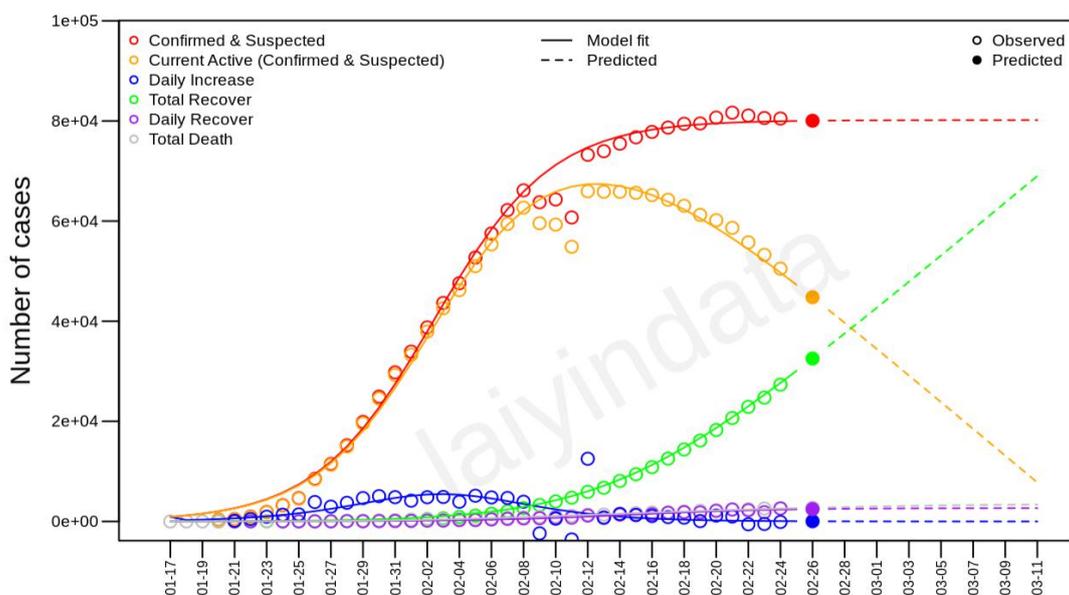


Figure 2 National confirmed cases and prediction model (Source: <https://ncov2020.org/zh/predict-2020-02-26/>)

TOPIC III : URBAN RESILIENCE

GUEST Mr S. Anantha Krishnan

Mr. S. Ananthkrishnan has over 37 years of experience in international development work, **including over 15 years of work with the UN in Nairobi Kenya (UNEP and UN Habitat)** engaged in urban youth empowerment initiatives, policy and research, advocacy, program management and development and implementation of projects. Currently, engaged as the secretary general of Urban Economy Forum, looking at the ways and means to strengthen the economies of cities and towns to deliver services including in the health sector. Completed a number of assignments and initiatives for international organisations (e.g. World Bank) and national governments (e.g. Nigeria, China, Norway) on Crisis Recovery Assessment, Youth Entrepreneurship Award, Clean and Safe Energy, Urban Basic Services and so on. He is also the editor of the Chinese/English bilingual magazine UNITY (UN Initiative and Technology for the Youth).



➤ INTRODUCTION

The outbreak of COVID-19 has always drawn concerns of the population across China. As a public health emergency recognized by the World Health Organization, it has also attracted widespread attention from the international community. In addition to the fight against the virus, it is also particularly important to actively sum up experience in the crisis, learn lessons, and think forward for a better future. Many topics are worth discussing, such as people’s physical and mental health issues after the crisis, the improvement of the living environment and the quality of life. It is also important for us to figure out how to quickly resume production, consumption and economic vitality, while balancing the environment and ecology. By looking for innovation power in trials and transitions, we could enable cities with higher crisis response capabilities and higher quality development through planning, policy, and governance reforms. UES is committed to paying attention to issues about economy, society, demography, and health changes brought about by urbanization. Relying on the international platform of Xi’an Jiaotong-Liverpool University, this column aims to invite a series of international experts in related fields to participate in discussions, facilitate dialogues, and share their views on issues of concern to us. From a diversified perspective, we would expand horizons, collide with new thinking and finally contribute to the development of healthy cities.

01

Novel Coronavirus has obtained several names by different organisations, what are the meaning and would be the international impacts of WHO’s official name as COVID-19?

Coronavirus has spread in many countries, infecting millions of people all over the world. The World Health Organisation (WHO) initially assigned it the temporary designation of 2019-nCoV, and now officially it is called COVID-19 (Coronavirus Disease 2019), which I think is being adopted internationally.

WHO emphasizes that **“The right to health must be enjoyed without discrimination on the grounds of race,**

age, ethnicity or any other status. Non-discrimination and equality requires states to take steps to redress any discriminatory law, practice or policy.” When COVID-19 has been declared by WHO, it has been reported in the media that “the outbreak of the virus in December 2019, which originated in the city of Wuhan has led to increase d prejudice, xenophobia, and racism against Chinese and other people of East Asian descent”. So it is important to understand that the **consequences are not only related to health, but also can trigger prejudice against certain people or countries.**

A Commission on Social Determinants of Health (CSDH) was established by WHO in March 2005 to support countries and global health partners to help address the

social factors leading to illness and health inequality. The major social determinants that make countries vulnerable to infectious disease epidemics include **poverty, illiteracy, gender inequality, and rapid urbanization**. Reducing discrimination and stigmatization with regard to the infectious diseases and focusing on the most vulnerable groups especially women and children are of crucial importance and can be instrumental in minimizing and preventing further spread of communicable diseases including Ebola, Zika, SARS and COVID-19.



Figure 1 The oversea Chinese community has launched an anti-discrimination campaign on social media (Image from the Internet)

02 What would be the implications of declaring it as a Public Health Emergency of International Concern (PHEIC) to China and the rest of the world?

A Public Health Emergency of International Concern (PHEIC) is a formal declaration by the WHO of "an extraordinary event which is determined to constitute a public health risk to other States through the international spread of disease and to potentially require a coordinated international response". The declaration is publicized by an Emergency Committee (EC) of WHO made up of international experts operating under the International Health Regulations (IHR) 2005, which was developed following the SARS outbreak of 2002/2003.

The implications of the PHEIC are: **a) at the governmental level, the health ministers of the countries will have to strengthen coordination and cooperation among WHO Member States, b) to enhance surveillance measures at points of entry, increase public awareness efforts, and c) to develop a regional preparedness plan.**

As we know, WHO has dispatched experts to countries believed to be at higher risk of an outbreak of coronavirus to **assist in areas including case**

management, surveillance and early detection. WHO is also working to increase the capacity of national laboratories to detect COVID-19 by supplying reagents, testing equipment and training for staff. Essential personal protective equipment has also been dispatched by WHO to various countries. As COVID-19 has affected over 90000 people globally, only sustained international efforts can check this pandemic.

03 What can international organizations like UN do in capacity building and beyond? Is there any main barrier that needs to be overcome?

The Sustainable Development Goals (SDG) 3: "Ensure healthy lives and promote wellbeing for all at all ages". Under this goal, target 3.d mentions the strengthening of the capacity of all countries, in particular developing countries, for early warning, risk reduction and management of national and global health risks. UN can **assist in coordinating international relief and treatment efforts as well in securing cooperation among counties in research against virus to find cures such as vaccinations and medicines.**

As the Director of WHO Tedros Adhanom Ghebreyesus recently said, "While China was taking 'strong measures' to stop the outbreak from spreading, the rest of the world should work on preventing a further spread and controlling it". **Fear and misinformation can be more harmful than COVID-19 that we are fighting against** — it's important to focus on the facts about the virus and the risk to the public. Engaging and informing the public is important and the UN can play a key role internationally.

04 What would be the main concern of crisis recovery for major public health disaster like COVID-19?

Just like in any humanitarian crisis, public health disasters should be addressed in a seamless manner by tackling the immediate situation arising out of the crisis as well by beginning the process of early recovery. Early Recovery is both an "approach to disaster response which, through enhanced coordination, focuses on strengthening resilience, re-building or strengthening capacity, and contributing to solving rather than exacerbating long standing problems"; for example health systems and public hygiene are in bad shape in many countries, and new public health crisis emerges also because of this.

Hence, we have to contribute to a set of specific programmatic actions, for example training the health

sector personnel, make the health sector robust, as well as awareness raising among the public by engaging the communities that are important in every recovery response. In short, **while we are addressing the crisis immediately, we should also prepare for preventing a relapse or an occurrence of future crisis by creating a robust system in the communities and the health system itself.**

05 What are the systems that COVID-19 could have affected most and should be recovered?

Health systems and the economy in many countries will be affected, and we already see that they have been affected. With the virus now detected in more than 50 countries, economists are lowering their forecasts for global economic growth.

According to Overseas Development Institute (ODI) in UK, the immediate impact on the health of the population and connectivity are most visible in confirmed coronavirus spread, as well as through direct flight cancellations and travel bans resulting in flight cancellations. From the beginning as epidemic and now coronavirus become pandemic, meaning that it has reached beyond the borders of many countries. Countries need to take urgent and large-scale action mainly in the health sector given the impact of a pandemic health shock to all individuals and sectors. Countries, especially with low access to health services need to implement a range of health-related policies and information campaigns to contain the spread of the virus. In the long run, **countries in Europe and North America, the expected shortages in health personnel will have to be addressed through liberal immigration policies and higher wages.**

As pointed out by WHO, in order to mitigate the impact of epidemics, protect the health workforce and ensure continuity of health services during and after them, stronger health systems are needed. It is also important to maintain staff, efforts, and medical supplies to others not affected by the crisis. As we have seen, **all efforts shift to respond to the emergency. This often leads to the neglect of basic and regular essential health services.** Ironically, mortality rates of other diseases for which people could not get treatment may rise. **Hence a balanced approach to emergency care and normal health services in cities will be useful.**

Countries must also examine the potential economic fall-out and spill-overs effects. ODI's vulnerability index can examine a country's direct exposure to the virus through trade, investment, and movement of people.

Countries with constrained fiscal resources and weak health systems are less resilient and more vulnerable. **Strong urban economy and funding of health services to look after the crisis and recovery will be necessary.** Emergency relief funds that are provided by many donor countries should be channeled to address the spread of COVID-19. ODI should also focus more on health and prevention of the spread of Coronavirus.

06 What do you think are the challenges and advantages of cities to restore living and production?

There are challenges and opportunities when it comes to cities and infectious diseases. Urbanisation drives up the emergence and spreading of infectious diseases due to various reasons. New infectious diseases can emerge from nature, for example from birds, independent of the urban context and then will spill over to urban centres from where the spread becomes speedy. These zoonotic diseases from wildlife can spread quickly due to human population density in cities. Avian flu and coronavirus are among the examples. In poorer countries many of the large cities also have unhygienic living conditions such as in slums. People are more susceptible to diseases in slums with very little access to clean water and sanitation and crowded living conditions. Studies based on statistical data say that **"the greatest risk of infectious disease emergence is in the rapidly urbanising developing nations, in particular India, eastern China and southern Africa."**

Of course, **traveling from one city to another can easily "globalize" such diseases.** An example is the SARS outbreak in Hong Kong in the early 2000s was blamed not only on density but also on the high rate of people traveling into and out of the city. Hence the measures put in place for travellers in connection with COVID-19 is quite understandable. We should also keep in mind that the variety and complex nature of diseases and methods of transmission **"mean that even the best prepared city with the cleanest infrastructure can still be vulnerable to outbreaks"**.

On the other hand, **cities also offer possibilities for quick delivery of health services to many people at the same time,** detection of infections, monitoring and treating of affected people, and prevention of the spread of the diseases. City planning with the engagement of the population, and continuous monitoring can be powerful tools to improve the health of the urban populations as well as decrease the burden of communicable diseases. Economy of scale will be possible due to agglomeration. Research findings indicate that countries and cities with

low population densities face higher burdens to achieve coverage of facilities like health services. They also require more resources per capita to achieve the SDG targets. For example, maternal health or HIV care, more resources will be required in reaching people living apart or in a less dense manner. **Urban density can be good because resources are more easily shared.**

07 How to empower urban governance for speedy coordination? Could you please give any good example?

There needs to be an emphasis on good urban governance through which urban populations can play a greater role in the formulation and implementation of policies at the national and global levels. A top down approach where by **citizens are treated as passive recipients of cures or measures considered as harsh, intended to prevent the spread of diseases will make people resist** even well intended measures. **Openness and engagement of the community will create acceptance. There is no need to panic.** It is pointed out by experts that of contracting COVID-19, the respiratory illness caused by the coronavirus remains low. However, there is a need for being prepared for the worst case

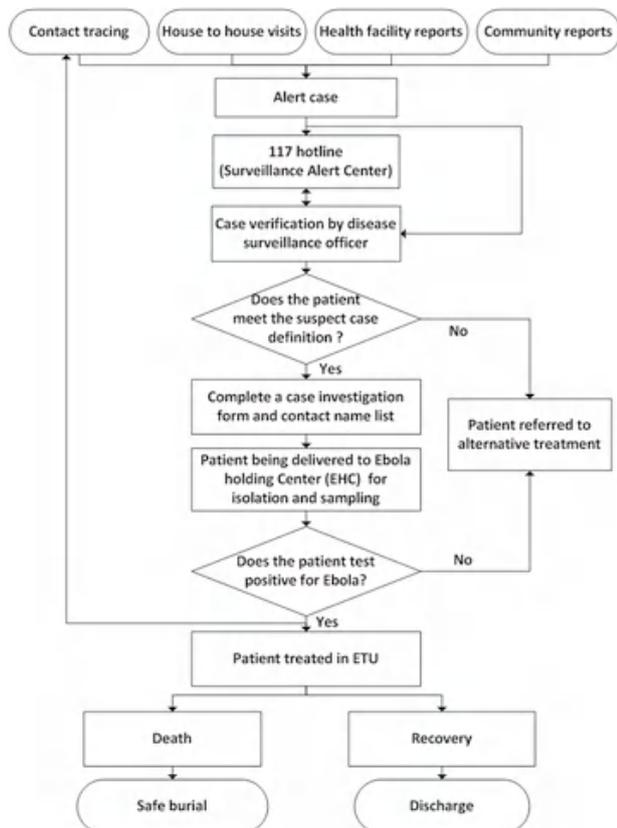


Figure 2 Field-operational workflow of Ebola virus disease case detection, investigation and management in three pilot communities, Sierra Leone (Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4974705/>)

scenario and hence the raising the awareness of the urban populations about the disease as well about simple and practical measures like washing one’s hands as often as possible.

In Sierra Leone, the **community-based strategy of social mobilization and community engagement** was effective in case detection and reducing the extent of Ebola transmission in a country with weak health system. This is described in a study funded by China, a practical community-based response strategy to interrupt Ebola transmission in Sierra Leone, the study was conducted during 2014–2015.

08 How do you comment the measures taken by China on COVID-19 so far?

The measures taken so far to halt the virus epidemic are very impressive and amazed – from what I gather, **the way how Wuhan and the whole province has been immediately quarantined as well as the way people are mobilized treated are indeed very praiseworthy. I am not sure if it can be replicated in other counties, but the lessons learned can be very useful.** The commendable volunteering work happening in the cities in China is also to be noted. It would be important for the world to know how the communities and city dwellers are being actively engaged in addressing this situation. If there is no further spread of the infection beyond Wuhan, it will be an indicator itself and gives room of optimism and recovery.

09 Despite tremendous efforts and coordination in fighting virus, some issues emerged deserves further attention, such as enhancing citizens’ health knowledge of and empowering their responses to infectious diseases. In your view, what would be useful ways for cities to build public recognition and confidence?

The local authorities and the medical community must address the real sense of suspicion, distrust, and cynicism that are probably embedded in the community. The health system should not be seen as a “control and punish” instrument. That’s why earning a patient’s trust is a very difficult task given the fact that how the medical practitioners and authorities are perceived. But medical education systems, hospitals, and physicians themselves can take steps to address this issue of fear and distrust. Even in a situation of quarantine, or an intrusive action, **there is greater need for robust evidence for what is being proposed is likely to achieve its desired aim.** When specific evidence is not available, decisions

should be based on reasoned, substantive arguments and informed by evidence from analogous situations, to the extent possible. **Any restrictions must be based on scientific evidence and not imposed in an arbitrary, unreasonable, or discriminatory manner.** In this context, one can mention, WHO's Guidance for Managing Ethical Issues in Infectious Disease Outbreaks (2016). We are dealing with people, not machines, so it's a question of people being able to communicate with medical and health systems, and the authorities must work closely with people to prevent the spread of the disease.

10 **Could you please finish by sharing your recommendations to the wider community?**

My immediate recommendation will be for the audience to have a comparative understanding of how disease like this has been tackled in different countries. Like students in your university can be able to reach out for different student communities across the world, so that there could be a better communication among communities in exchanging practices, experience and ideas. We

should use electronic media to communicate with each other, to find out what steps have been taken and what are useful, and how it can be done further. **Creating an international virtual network of students and young people to exchange success stories and good examples as well as about the difficulties can build global solidarity in fighting this pandemic.**

In the longer run, I would feel that we should think of doing international research to find out lessons learned from this disease and how the world can address and prevent such epidemics in the future. It will also be important to **look from the gender, age and social status dimensions**, how the disease affects people, is certain population (elderly people, woman) more vulnerable in facing the disease, and why so? Therefore, we should look into the **specificity of how we can fix certain population**. And this is what I think we should be able to study, research, understand, at the same time analyse and inform each other.

We should have optimistic approach to fight the disease and we can end well with optimism just like what we have done with other diseases in the past.

TOPIC IV : LIVING CITY

GUEST Mr Geoffrey Payne

Mr Geoffrey Payne is a housing and urban development consultant. He founded Geoffrey Payne and Associates in 1995 after many years as an academic (e.g. Oxford Brookes University) and has since undertaken research, consultancy and capacity building assignments in all regions of the world for a wide range of international development agencies (e.g. World Bank, UN-Habitat, UNDP), governments and academic institutions. He has published widely and contributed to numerous international conferences. He is currently a member of the RTPI International committee and adviser to the President of the UK Built Environment Advisory Group.



➤ INTRODUCTION

Enabling Approach - to effectively balance social creativity and market vitality
Resilience Thinking - to use the third world solutions to solve first world problems
Planning Education - to consider who won the benefits and who lost the benefits

01 Now that hundreds of millions have been lifted out of poverty, it's time to move towards quality growth and to reconsider what we mean by development. Has economic growth become an end in itself, rather than a means to an end? If the latter, what is the end?

For the many people globally who have never known material comforts or financial security, the desire to acquire them is natural and justified. However, there's a lot of research which shows that above a certain level of income, the benefits to individual well-being diminish. In fact **people with very high level of income or wealth is not necessarily happier than somebody on the middle income level.** One can only live in one place and enjoy one good meal at a time. High consumption levels set a bad example to the world since it is incompatible with the world's finite resources, no matter how ingenious we are. We are now at a level of awareness that we need to rethink what we mean by development and **put a limit, through environmental taxes and other means, on excessive consumption of finite resources, be that land, property or commodities and learn to value the things that money cannot buy.**



Figure 1 The Ecological Environment for Polar Bears Has Been Damaged. (Source: National Geographic China. <http://m.ngchina.com.cn/>)

02 The climate crisis requires that we re-evaluate development policy. What are the challenges involved in achieving this?

Everywhere I travelled, people said that the climate is changing rapidly, and threatening local economy activities such as agricultural production. Greater international collaboration is urgently needed to ensure that immediate action is taken to reduce global warming to less than 1.5C above pre-industrial levels. Of course, the

countries that have the greatest responsibility are those that are **highly industrialised and have the greatest resources (financial, technical and institutional) to address the challenge**, so they (we in the case of UK) should take the lead. However, it does need to be a **collective effort since it is in everybody's interests**. What will our children and grandchildren think of us if we fail them?

03 How to empower social capital and manage markets in the public interests?

This is another key issue given the global application of financial markets as the means of realising progress. **The global financial crisis was triggered by the mismanagement of the housing sector in just one country the USA**, but we do not seem to have learned the lessons. Markets have become like teenagers, wanting to party non-stop without thinking about the possible hangover the day after. So like teenagers, **markets therefore need to be firmly regulated to ensure that they serve society**. At the moment societies seem to exist to serve the interests of markets. This needs to change – and soon.

04 What are the challenges for promoting an 'enabling approach'? How do you reflect on the role of the international organization such as World Bank?

Well I got involved with the World Bank initially in 1989–1990 to write a paper, and I was very disappointed to see the World Bank housing sector policy paper in 1993 was called 'Housing: Enabling Markets to Work'. **This was at a time when the Bank fully subscribed to the neoliberal agenda of markets being the means of solving the world's problems**. Experience since has demonstrated the naivety of such approaches and the negative impacts it has had globally. **The enabling concept started in the 1950s and 1960s as a means of enabling people and communities, not markets**. This is what we need to get back to. **The World Bank has become much more pragmatic and context sensitive in the last decade or two, though many bi-lateral funding agencies are increasingly seeing international development as a means of promoting self-interest**. This is an extremely regressive step and will prove counter-productive.

05 What should be the meaning of quality of life and quality of life for all?

This of course is the really big question. Speaking personally, my priorities have changed with age and circumstance. When I was young, I was quite materialistic, but now I am lucky to have a lovely home

and family, reasonable health and financial security, I find that what makes life great is doing what I can for others. It seems to me the **public policy should seek to enable the global population to have enough money to ensure a healthy, secure life and that excessive wealth should be taxed heavily** since it is bad for society and even worse for the planet. As I said earlier beyond a certain income level, there is no direct correlation between income and happiness and the planet simply cannot sustain unlimited growth. **We need to distinguish between needs – which are relatively modest – and wants - which are unlimited and which advertising promotes even though it does not make us happier**. In fact in many cases it make people feel more insecure if they don't have the latest gadget. **Market economics encourages countries and people to compete with each other, yet the climate emergency and the stress that this puts people under, suggests to me that we need to build an economic system that focuses on meeting basic needs and encouraging collaboration**. This means we need to redefine what we mean by a good quality of life and economic development should be a means towards that end, not an end in itself as seems to be the case at present.

06 How can we plan and manage urban areas as part of a vision for a good quality of life for all?

Cities need to reduce their ecological footprint. At the moment they are a major contributor to global warming and air pollution and other problems. I co-edited a book published in 1990 called '**The Living City: Towards a Sustainable Future**' which built on the work of many other people who have been addressing this issue. The publishers recently decided to reissue the book without asking for any changes. While this is flattering personally, **it is actually depressing to think that the point still needs to be made 30 years later**. We need more compact cities, with improved public transport, energy efficient buildings, self-sufficiency and participatory decision-making at the local level, so all people feel valued and able to meet their needs. We also need to ensure that **housing is seen primarily in terms of homes, not commodities for investment**. Making our cities environmentally and socially sustainable also provides a massive potential for job creation, and addressing the climate crisis, so we need to see the issue as an opportunity, not a threat.

07 Given your extensive work in different contexts, how do you describe people as being resilient and resourceful?

Necessity is the mother of invention. In my work

globally over fifty years, I am amazed at the resilience people all over the world show in facing challenges of all types. Interestingly, **Cuba is listed as one of the most sustainable societies globally because the government has prioritised health and education for all.** This helped it score highly on the Human Development Index and environmental sustainability despite – or partly because of – external economic constraints. Of course, things are not perfect in Cuba or anywhere else and billions of people globally lack the basic necessities and have been showing amazing resilience out of necessity. I published an article in 1979 called ‘**Third World Solutions to First World Problems**’ demonstrating that **a lack of resources had led to many governments in the Global South responding to rapid urbanization with a series of pragmatic policies based on what people needed. Sadly, many governments regarded such compromises with conventional approaches as a failure, while I thought they were showing resilience and resourcefulness.** I think we all need more of that now. And there are many lessons from practical experience showing that people, if they are involved actively in local decision making, can make a very positive contribution.

08 How do you reflect on future planning methodologies and planning education?

Planning courses need to make students aware of the needs of the most vulnerable sections of the population



Figure 2 A street in Cuba (Source: Micro-blog @nanshan _Nathan)

they will be serving. An Indonesian professor set his new architecture and planning students an exercise in the first week of their course. They had to go into a low-income informal settlement (where he had made arrangements) interview some local people, do a sketch of their house and make a presentation to the class at the end of the week. This enabled him within just a few days to assess their ability to:

• empathise with people from a very different social and economic background

- prepare a logically constructed questionnaire
- evaluate the findings
- understand spatial forms and represent them visually and
- communicate their findings clearly to another group of students

His main reason though was to make sure that **even if they spent their whole careers designing five star hotels or planning cities, they would be aware from the outset from their education that their primary role was to serve all sections of society.** I think that provides a very good basis for planning education to help improve planning of cities and housing projects.

09 So what does all this mean for the role of professionals?

Throughout my career, **I have always asked myself one simple question when contributing to a new policy proposal or evaluating an existing policy: Who wins and who loses?** Hopefully, the answer will be to ensure that we professionals help vulnerable groups benefit, not suffer. Of course governments and the international community have the ultimate responsibility for achieving progress. However, the **professional community has the responsibility to ensure the governments have all the evidence to generate public support to make difficult decisions.**

TOPIC V : SPORTING ECOSYSTEM

GUEST Geoff Thompson MBE FRSA DL

Geoff is the Founder and Chair of the Youth Charter, a UK-based international charity and United Nations Non-Governmental Organisation that uses the ethics of sport and artistic excellence to help disaffected and disadvantaged young people and communities globally.

He was the World heavyweight karate champion between 1982 and 1986. In 1995 he was awarded an MBE by Her Majesty, Queen Elizabeth II for his services to sport. Between 2008 to 2014, he was awarded an Honorary Doctorate of Law, Honorary Fellowship, Honorary Doctorate of Education and an Honorary Doctorate of Letters from several universities.

He has worked on assignments for United Nations agencies such as UNESCO, UNICEF, ILO, WHO and the UN Office on Sport for Development and Peace as well as the FIFA, Commonwealth Secretariat and Swiss Agency for Development.

Geoff is also a Deputy Lieutenant (Queen’s representative) for Greater Manchester and has been inducted into the Martial Arts Hall of Fame. Between 2016 and 2019 he was included in the Top 100 BAME (Black and Minority Ethnic) Leaders in Business List, in association with the Sunday Times.



➤ INTRODUCTION

Today, the world could be changed through an APP and people increasingly rely on electronic devices because of the epidemic. In this case, the advocacy of sports should benefit from, rather than be restricted by information media.

After his retirement, Geoff Thompson, the five-time karate world champion, is committed to encouraging young people to participate in sports and art activities. By doing so, Geoff helps young people improve their lives, and empowering them with employability and entrepreneurial spirit. His work starts on campus and increases the resilience of the wider community.

It is reported that he will cooperate with Xi'an Jiaotong-Liverpool University in the near future to implement an intelligent "sports ecosystem" integrating health and well-being promotion, academic research, innovation opportunities, business opportunities and community development on campus.

01

The outbreak of COVID-19 has stimulated people’s reflection on pursuing a healthier life. What is your view on possible behavior change after this?

The 24/7 lifestyle and digital age means we are experiencing a significant and increased level of on-line activity and this will be even more apparent during the current pandemic globally. As a result of the COVID-19 epidemic, we will need to see a more balanced and

holistic approach in lifestyle behaviours that sees us pursuing a new approach, which I would now like to call ‘physically interactive’.

There are many apps/programs/platforms online that now provide an opportunity to be very engaged with multimedia, digital learning and physical activity. What I believe will happen is that we’ll see a more blended, innovative and ongoing improvement on how we strike a better balance between what we do online with the

physical activity and behavior lifestyle tools available to this, and what we do with any actual exercises that we can now undertake at home, in our respective work environment or in our schools, universities and communities.

02 Why is physical activity important, particularly when the mental and emotional wellbeing is concerned?

We are primarily a species of homo sapien (Latin meaning: wise man) innate physical aggression. Aggression has many forms of expression. Passively, overtly, intellectually, intelligently, tactically, or even strategically expressed but ultimately it is **our physical forms that allow our bodies to be the hardware to all the software that courses through our bodies, veins, muscles and body mass.** Whatever the body type, we are all physical expressions of everything that we feel with the energy reflected in the indomitable human spirit.



Figure 1 Geoff in the contest

When I talked about sport as ‘a tool, a vehicle, a vaccine’, I’m talking about its ability to stimulate us, and allow us to feel the environment around us, and to socially and culturally engage with our environment, the people, the interpersonal relationships and everything that we would see give us a positive mindset and quality of life as a result. From my own karate experiences, it was the ability to acknowledge the younger to be able to engage with a group of diverse backgrounds, lifestyles and experiences that improve my interpersonal skills. The actual techniques that I learned, and the karate behavioral characteristics that I gained have improved my personality, and developed what I called a ‘curriculum for life’. **That is a daily ritual, a habit and routine of training and the disciplined and repeated training, that established my confidence, my self-esteem, self-respect and as a result respect for others and my community.**

03 What is your philosophy on behavior and performance in pursuit of excellence? How does your five times world championship contribute to its development?

My philosophy is derived from my belief and experience of coaching human behavior and performance over many continents, cultures and intergenerational abilities that ‘99 percent of fitness is between the ears’. That means that **your mind-set is developed as a result of a disciplined focus and behavioural-set of rehearsed tasks and actions. The mentality that supports the mind-set is one of the social and cultural environments that has shaped your emotional intelligence.** That in turn informs your brain power, which, like software, is consistently uploaded by the cognitive influences of the cerebral cortex. Many people call that the ‘third eye’. This is when millions of images that we receive every day shape the emotional armour and resilience of what we see, feel, touch, taste, smell, and hear. These are all developed to ensure that we survive experiences such as COVID-19 and any life adversity.

The level of excellence is the ability to visualize all the information that is received and translate that into a mission of aims and objectives with the plan. That plan can be then translated into a platform of action and impact. The ‘winning philosophy’ can be applied to real life, study and the work environment. How that can be done is again by making sure that you have a vision, a mission, and a plan. And as a result of that plan you can set yourself a direction, a place where you want to arrive at, you can then identify a timeline.



Figure 2 Geoff on the podium

My five world championship successes were the culmination of a vision, mission and plan expressed and reflected in many hours of repeated behavior, ritual, habit and focused discipline. Young people now live in a far too fast-moving world, information is available to them interactively using their thumbs, which are arguably

the most exercised part of their anatomy. However, **they are young, bright minds of software, and as a result, they need to be given even more daily rituals, habits and routines of behavioral characteristics of exercise, human interaction and the ability to see them use both the digital age and their mental, physical and the emotional potential in a positive and constructive environment.**

04 What are the main challenges to engage people in sports in the context of hustle and bustle of urban living? Any good approaches for reshaping healthy living habits?

The 24/7 global interactive lifestyle is now one of the greatest challenges to the mental, physical and emotional health and wellbeing of society as a whole. Technology is playing a greater part in our everyday physical activity aspirations with more apps and artificial intelligence providing data with machines, gymnasiums and on-line coaching that can give an individual the sense of personal achievement and above all the evidence to benchmark their efforts. However, **you cannot replace human social and cultural interaction that develops the individual and collective relationships that are the bedrock of society in all its shapes and forms.**

I am currently working on a program called ‘Healthwise’. There is firstly a **Skills** element, which is to develop a routine of exercises, drawn from a very diverse and broad suite of physical skill-based movement related activity, that can suit any body type, any fitness level or any interest or suitability of exercise. Then the second element is how that is translated from skills into an **Actual Activity of Choice**. So for example, mine would always be the martial arts and karate in particular, at 62 years of age, I was planning to compete on April 12 with the current generation of karate athletes. So I then went to the skill level and tested myself in the skills and the training that would see me assessed as to whether I could meet that challenge. And then the **Application**, the plan, the test, a competition, a marathon and what would be other opportunities to be able to test the healthwise approach. **A goal of some description that could help you get that recognition reward and respect of a job well done.**

This has been developed over many years and provides a range of ‘interactively active’ fitness schedules that have been devised to specifically meet the lifestyle demands of the everyday student, professional or wider community enthusiast. With this system, you can stay in exceptionally good mental, physical and emotional

health. **I believe that it could also re-engage and re-establish the all-important relationships that would need to resolved once this pandemic has ended.**



Figure 3 "Healthwise" program

05 What is the value of youth sports education? Why should we emphasize this with the young people? Do you think what is practiced in western countries would be applicable to China too?

I believe that sport is education, the truest form of education for it establishes behavioural characteristics and it turns good citizens into great global citizens with rights and responsibilities. It could be attainment and performance in the classroom, in the playground or campuses or beyond into the society as a whole. There was an example once when I was in Africa with a school, which had no classroom learning, no pens or pencils and quite frankly, just had a shell of a building. We were part of a UK trade mission, where sport was being used to engage the wider community in providing cultural elements to Britain's trade aspirations and intentions. We came up with a program of learning to use a ball, and with the martial arts I just needed the space, all I had to do was to perform. But **we were able to deliver literacy,**

geography, history, a whole curriculum of learning through sport. And it very much inspired what I believe to be sport as an educational opportunity in developing a well-rounded global citizen.



Figure 4 Geoff is visiting a school in Africa

Young people are a social, cultural and economic investment and the Youth Charter philosophy and mission aim is to: **engage young people with sport, culture, art and digital activity, equip them with mental, physical and emotional life-skills and resilience and empower them with the aspiration of further and higher education, employability and entrepreneurship.** The additional benefits are realized through the global citizenship of rights and responsibilities, and in contributing their gifts and talents of potential in the ongoing betterment and improvement of themselves, their families, their communities and society as a whole, both locally and globally.

I believe that what is practiced in western countries would be applicable to China as well as Chinese practices being applicable to western countries. I'd like to use Tai Chi as a wonderful example. Tai Chi is one of those activities that is of intergenerational and exceptional benefit to mental, physical and emotional health well-being and safeguarding. It is one of the cultural activities that is becoming globally introduced to many societies and into general lifestyles. That's the example of what China is giving the world, and I believe that **sport and the arts are a universal language and when a diversity of cultures come together, you see global citizenship at its greatest level of building bridges for hope and opportunity for all.** So, I believe that China is helping as many nations to provide and present cultural activity that is transferable and build bridges of peace and tolerance.

06 What is holistic sporting ecosystem and why do you think this is what we should aim for?

XJTLU sport will aim to develop and deliver **good health**

and well-being, providing academic programs, research and innovation, business enterprise, community development and excellence as a world leading institution locally and globally. These strategic themes will also be delivered within the United Nations 2030 Sustainable Development Goals.

A holistic sporting ecosystem will also aim to take forward the newly developed XJTLU leadership agenda ecosystem and symbiosis themed centre of excellence:

- 1.Social responsibility and charity
- 2.Basic education
- 3.Community of teacher development
- 4.Community of learning and teaching innovation

These policy implementation themes are delivered within the vision and mission strategy process platforms and cultural mechanisms of a connected digital AI robotics leadership service within an XJTLU SIP and TC campus. **This sporting ecosystem has been developed as a community campus model, cultural framework and research impact metrics that can provide imperial outputs and outcomes of quantitative and qualitative social, cultural and economic data,** which I believe is a very valuable currency in 21st century learning, innovation, development and research.

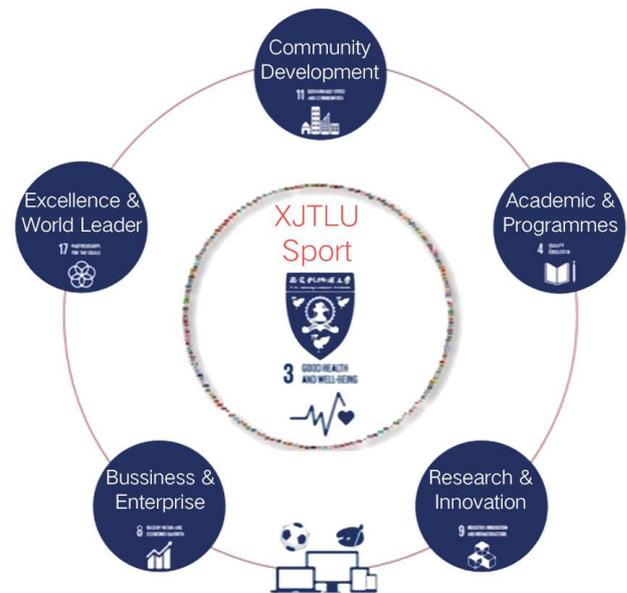


Figure 5 Sporting ecosystem of Xi'an Jiaotong-Liverpool University

07 How can we maintain this ecosystem and contribute to community resilience?

The benefits to both the institution and the community are reflected in the mental, physical and emotional health, well-being and safeguarding of the staff, students

and wider community. An example of this is the Youth Charter Social Coach Leadership Program. This would see students and staff as social coaches contributing a minimum of 2 hours a week to wider community and civic engagement providing sporting, cultural, artistic and digital activity both on and beyond the campus. The hours contributed and collectively delivered is a great currency that develops that wonderful resilience we are

seeking to re-establish, re-connect and re-position once COVID-19 is consigned to history. Social coaches with strong emotional intelligence are able to provide a story that inspires hope and opportunity. They bring common sense, wisdom and life experience lived. That is why they form a very central part of what I believe would be a significant offer for staff and students for the community, by the community, and with the community.

TOPIC VI : HEALTHY CITY

GUEST Mr Qining Chen

Mr Chen Qining is currently the Board Member, President of State & City Planning Consultants Pte Ltd (China). He has more than 30 years of urban and regional planning experience. He had worked in Suzhou Industrial Park Administrative Committee. During 1994 to 2004, he was involved in the planning and development of the 70sqkm SIP. Prior to that, he worked Jiangsu Province Planning Design Institute. His expertise includes strategic consulting, concept plan, master planning, detailed planning and operational planning etc.



▶ INTRODUCTION

The outbreak of COVID-19 has not only raised the health awareness of "people", but also triggered self-examination of "urban" immunity by planning practitioners. In this dialogue, we invite Mr. Qining Chen, president of Singapore SCP Consultants Pte Ltd, China, to share professional views on healthy city construction from a practical perspective.

01 What urban diseases have been exposed in the pandemic? Which can be overcome from the perspective of urban planning and construction?

This outbreak since late 2019 has been a public health emergency. Before this, China has experienced the SARS in 2003, the bird flu in 2004, the hand-foot-mouth disease in 2007, and the H1N1 flu in 2009, through which it has gradually accumulated experience in dealing with public health emergencies. Infectious diseases are becoming increasingly threatening to human beings in modern society, and since 2003 China has introduced a series of laws and regulations, defined the management structure, as well as established the early warning and emergency response mechanism.

Although some criticized the lag of reporting and releasing of disease information in the early stage of the outbreak, the Chinese government then took decisive measures soon, such as the construction of the mobile cabin hospitals and the Huoshenshan hospital, the increase in the production of masks, and the implementation of the lockdown of cities to contain the outbreak. In general it has been well controlled and the outcome has been optimistic.

This outbreak reminds us that we should make rational **planning for public health and emergency medical facilities** in advance, and include them into the Urban Comprehensive Disaster Prevention Plan. It should also be further included into the new round of National Spatial Planning, in which enough land space should be reserved.

This outbreak is also a reminder that we should pay attention to urban public safety planning, including the **prevention of natural disaster, accident calamity, and public security**. These issues are easy to be ignored in ordinary times, when there is no accident, we do not realize the importance of them; however once there is the disaster, we will then face a huge problem. Therefore, **it is the role of urban planning to predict the future risks and nip them in the bud.**

02 Will the concept of 'healthy city' attract more attention in the post COVID-19 time?

This outbreak will inspire the Chinese government and all sectors of society to attach great importance to 'healthy city', and will lead to a construction boom of healthy cities, towns and villages. 'Healthy city' is a concept

advocated by the World Health Organization (WHO) in 1984. The idea was firstly implemented in North America and Europe with a series of healthy city project being initiated. These projects put people first, emphasized on building healthy communities and work environments based on people's lifestyles; and then expanded to macro influential factors such as healthy regional economic and social development, and global climate environment. You will notice that 'healthy city' is progressive concept, **firstly it is about environmental hygiene, then medical care and personal behavior, and finally it concerns the social factors that affect health.**

In 1994, WHO defined a healthy city 'is one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and developing to their maximum potential'. It can be seen that the implication of a healthy city could be very broad. **From the perspective of people's health, it covers health maintenance, mind nourishment and character cultivation,** which is related to a comprehensive health idea of people's physiology, psychology and morality. **From the perspective of promoting the practice of healthy city,** it is not only the matter for medical and health departments, but also **a matter faced by all government departments, social organizations and people in the whole society.**

The concept of 'healthy city' was introduced into China in 1994, when 'patriotic health campaign' was then transformed to the idea of 'healthy city', and this approach was firstly promoted in Beijing, Shanghai, Suzhou etc. After the SARS outbreak in 2003, healthy city construction was becoming popular in China. In 2006, the second international convention of the Alliance for Healthy Cities was held in Suzhou, and the city received the Good Practice Award in health city. Suzhou was the first city recommended by the National Patriotic Health Campaign Committee to WHO to carry out the construction of a healthy city. So far, the city has received 32 awards from WHO and Alliance for Healthy Cities.

According to the big data analysis provided Suzhou Center for Disease Control and Prevention, chronic diseases account for 96% of total deaths in Suzhou. Therefore, Suzhou adopted the '531' series action plan, to establish 5 collaborative disease treatment centers (chest pain etc.); to form 3 screening mechanisms (tumor etc.); and to build a comprehensive public health management service platform. Suzhou has also released the Plan Outline Healthy Suzhou 2030, which makes it clear that the **focus of health service in Suzhou**

will shift from 'disease curing' to 'health promoting', and explore the path of healthy development from multiple dimensions including disease treating, disease preventing, supervising and participating. Last year, average life expectancy in Suzhou reached 83.5 years and the city was awarded the title of Healthy China City of the year in China.



Figure 1 Suzhou Cityscape (Source: Internet)

Suzhou is a microcosm of China's many health cities, with both achievements and remaining room for improvement. According to the 2019 Annual Report on Urban Development of China, among 288 cities in prefecture-level or above, only 35 are in a state of relatively healthy, accounting for only 12%, and more than 80% of the city is in a state of 'sub-health'. I believe that after COVID-19, governments will see the value of building a healthy city, and the number of healthy cities will also be greatly increased.

In 2014, our company SCP have jointly conducted research on healthy city and held an international symposium on healthy city together with Soochow University and XJTLU. Researchers, designers and practitioners from all over the world, including United States, Japan, Singapore, South Korea, Australia and Hong Kong had gathered in Suzhou, and discussed



Figure 2 Kampung Admiralty, Singapore (Source: ArchDaily)

various aspects of healthy city, including: **index system of healthy city, medical and health service system, healthy public facility, built environment, transport and infrastructure, health industry as well as elderly care service system.**

Then, what is the international benchmark for a healthy city? BBC has named the world's top five healthy cities, and they are Tokyo in Japan, Singapore, Copenhagen in Denmark, Perth in Australia and Monaco. Again, Singapore and Copenhagen were included in the list of world's top ten healthy cities made by the American CNN. What the two cities have in common is worth studying: they both emphasize on **urban planning, health care system and public transportation; set up cycle lanes and health trails system; encourage sports and garden city construction etc.** Their aim is to help people develop a better way of life, let them spend the budget on the prevention instead of the curing of disease. We therefore believe that **reducing the number of patients is the best health care system.** We also predict that the study of healthy city will be a hot topic in the near future, and the concept of health should be integrated into urban planning- better planning, healthier city.



Figure 3 Singapore Master Plan (2019) (Source: Singapore Master Plan 2019)

03 What will be the development trend of China's future comprehensive health industry?

The outbreak of the epidemic has made us realize the importance of the comprehensive health industry in urban development and planning. Health industry covers broad fields: in the primary industry, it involves agricultural products cultivation, food, safety etc; in the secondary industry, it involves pharmaceutical and medical device industries etc; and in the tertiary industry, it involves medical and health care, sports, elderly care, insurance, R & D, and informatization etc. Some places are building health care cities/towns, seeking to integrate the breeding, processing, marketing and health care

service together, and aim to **achieve interconnected development of the primary, secondary and tertiary industries.**

The value of China's health service industry had grown from 2.4 trillion yuan to 8 trillion yuan between 2011 to 2020, with an annual growth rate of 14.3%. According to the Plan Outline of Healthy China 2030, the value of China's health service industry is expected to reach 16 trillion yuan, which is a very big increase. It is also predicted that there will be great development in the manufacturing industry of Chinese biological medicine, new varieties of chemical medicine, high-quality traditional Chinese medicine and high-performance medical devices.

From the perspective of medical treatment, more social forces will enter the medical field and more foreign investment will be attracted to set up hospitals in China. **With the promotion of 5G, big data, cloud computing, Internet of Things and a series of high technologies,** the medical and health field of human society will experience tremendous changes. **Wearable devices, smart health electronic products and health care mobile application service will come into our lives.**

The combination of China's health industry with artificial intelligence and big data has already made some achievements. For example, during the outbreak of COVID-19, the 'health code' in Alipay had been adopted and promoted to 100 cities in the first week and quickly became the standard tool in urban epidemic prevention, which is **a good application of individual big data in disease control.**

Health industry can be integrated with elderly care, tourism, the Internet and the fitness industries, to form new health-related business model. A variety of **sports fitness clubs and amateur sports events,** as well as **fashion and leisure sport programs** with consumption leading characteristics, such as snow and ice, mountain, water, motorcycle, aviation, equestrian and extreme sports will continue to appear.

In terms of urban and rural planning, there will be many new built forms, such as **medical mall, health care complex and health care city, which will put more emphasis on mixed development.** Meanwhile, there will also be many **health-related industry parks,** such as biomedical park, medical apparatus and instruments park, health emergency industrial base and so on.

04 How to improve the construction and layout of health facilities in the city?

Health facilities include a wide range of facilities for disease prevention, treatment and rehabilitation. The construction and layout of health facilities mainly include the arrangement of hospitals and clinics. The China's health care system has four main characteristics: **1) the total amount of resources is insufficient; 2) the resource distribution structure is unreasonable; 3) lack of coordination in the service system; 4) public hospitals are expanding too fast.** An indicator of the amount of resource is the number of hospital beds. Despite its continuous increase, the number of beds per thousand in China only reaches 6 in 2020, which has an evident gap comparing with 10+ in developed countries. Unreasonable resource structure is reflected in the **weak community level health institutions, and as a result, people often choose class-A hospitals when they are sick.** This structure should be improved to greatly strengthen the construction of community health care facilities.

Urban planning should also consider not only the conventional medical facilities at all levels, but also emergency medical facilities, such as the pre-arranged planning for mobile cabin hospitals and the Huoshenshan hospital.

As China is entering an aging society, **geriatric hospitals, nursing homes for the elderly, and rehabilitation institutions also need to be arranged in advance. It is better to combine them with the hospitals.** When designing community centers and neighborhood centers, in addition to the medical clinics, we also need to consider health care services for the elderly, providing daily care, chronic disease management, rehabilitation, traditional Chinese medicine health care services for them, and even extending nursing services to residents' homes.

Health facilities should also include sports, fitness, leisure equipment and public open space to promote people's physical and mental health. The city should be able to provide more small parks, running tracks and basketball courts, which belong to **disease prevention facilities.**

05 So far COVID-19 has spread to more than 200 countries and regions in the world, among which the control measures in Singapore have been relatively effective. Community is the basic unit of urban health, so what can we learn from the community planning in Singapore?

Singapore's community planning is very distinctive, with its public housing system world famous. Punggol New Town, for example, conforms to the characteristics of the

WHO healthy city. It has mixed development of industry and residence, mixed multi-ethnic living which leads to social stability; commercial, medical, education, sports and welfare facilities available within 5 minutes walking distance; good quality waterway and greenery; and high coverage of TOD bus service.



Figure 4 Punggol Waterway Terrace, Singapore (Source: Internet)

Today, the focus on community level organizations and community public service facilities is emphasized by many researchers and practitioners in the planning field. Since the outbreak of COVID-19, this topic is also discussed a lot by Chinese planning professionals. **Singapore emphasizes the two-layer structure of new towns and neighborhoods, neighborhoods are like healthy cells, when the cells are healthy, the body is healthy.** Suzhou Industrial Park has learned from the experience of this 'neighborhood unit' and 'neighborhood center' concept since 1994, and has achieved very good results.



Figure 5 Transit Priority Channel, Bencoolen Street, Singapore ((Source: SCP Wechat official account)

In fact, the idea has been around since the British Garden City Movement in the 19th century. The British planning system places a lot of emphasis on the basic unit. In the 18th and 19th centuries, epidemics of infectious diseases such as malaria and cholera in British cities **promoted the integration of urban planning and public health systems.** In 1848, the British Public Health Act was enacted, which became the first comprehensive public health act in human history to promote urban development. In order to solve the 'urban disease'

brought by industrialization, the British planning pioneers kept exploring, and in 1898, the Garden City theory was proposed, which laid an important foundation for the birth of modern urban planning in the early 20th century.

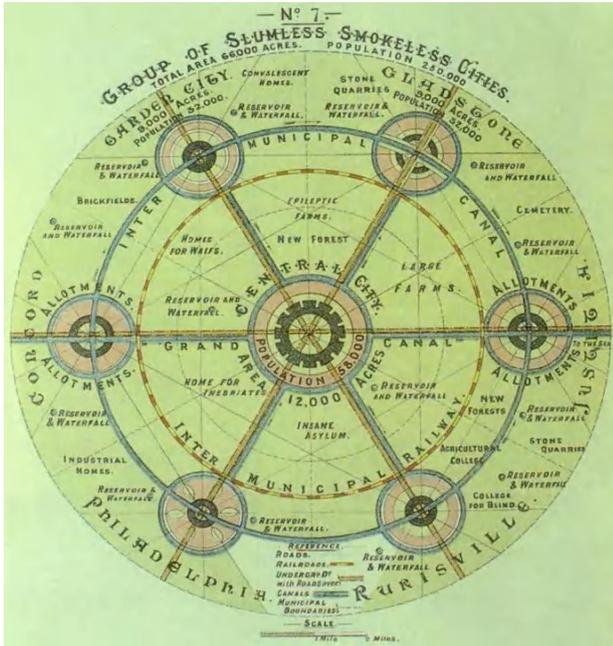


Figure 6 Garden City (Source: Internet)

Chronic noncommunicable diseases have expanded since the 1960s, and the outbreak of infectious diseases in the 21st century have brought new challenges to healthy cities. It seems that these planning ideas are still working in the current context. For instance, 1) neighborhoods and workplaces should be close to each other in order to reduce long-distance mobility, lower the flow of commuter traffic, as well as reduce traffic congestion and vehicle emissions; 2) abundant community-level service facilities can bring more convenient daily services to residents, including medical care and healthy leisure services, which will help to increase the neighborhood cohesion- this is also the future development direction of healthy cities.

Nowadays, many places are talking about the “Future Community”, which is driven by new technologies and the Internet of Everything. This is our future hybrid living space, a new way of life, and a form of healthy cell in our healthy city. In short, **the outbreak of disease has shown us the value of the community.**

06 Based on these opportunities and challenges, what are the new requirements for the professional quality of urban practitioners?

Urban planning is a kind of science, an art and a policy movement. Planners need a very rich knowledge structure. They should not only care about the built form, but also pay attention to economic and social development, and at the same time, they should not forget urban safety issue.

According to an urban historian, **a city is a safe, busy and sacred place**, which is the triple attributes of a city. Usually we focus on the attribute of ‘busy’, working for industrial development and urban expansion- planners are always very busy. This outbreak reminds planners to pay attention to safety issue. It covers a wide range of fields, involving nature science and engineering. Each field is deep and specialized, such as lifeline engineering, health care safety, infrastructure planning and design etc. Urban planning also involves a lot of sacred elements. In the past, it may be temples, churches, squares and palaces. Today, it could be cultural buildings, opera houses, civic activity centers where people pursue their spirit.

In such a complex system, urban planning is an industry requiring collaboration, which inspires us that the requirement for professional quality is the ability to learn, especially deep learning ability. **Planners should shape themselves becoming expert in one field while possessing all-round knowledge and ability, namely the “T-shaped Talent”. The horizontal can be achieved through collaboration, while the vertical is where our value actually lies.**

The length of the vertical line is the degree of expertise that determines our height. All the planning and design agencies are professional service institutions, which rely on their expertise. The number of horizontal lines determines our breadth, a lot of enterprises are now emphasizing the integration of resources and collaboration of work. An excellent urban planning work is the result of the collaboration of numerous high-value talents.

Therefore, the most important thing for urban practitioners is to **find their own positioning, continue to dig deep into their own professional area, be able to leverage their comparative advantage with continuous innovation, and become a specialist in their field. At the same time, they should also have an open mind, so as to actively cooperate with people around.**

TOPIC VII : URBAN SPACE

GUEST Prof Steffen Lehmann

Dr. Steffen Lehmann is an internationally recognized educator, scholar, author, urban designer, and strategic leader. He is Director of the UNLV School of Architecture and tenured full Professor of Architecture. He is also Co-Director of the interdisciplinary Urban Futures Lab, and CEO of the Future Cities Leadership Lab (see www.city-leadership.com). He was the inaugural Chair holder of the UNESCO Chair for Sustainable Urban Development for the Asia-Pacific Region, and has held senior positions in several universities across Europe, Asia and America. Before establishing his own practice Steffen Lehmann Architekten & Staedtebau GmbH in 1993 in Berlin, he worked with Pritzker-Prize winners James Stirling in London and Arata Isozaki in Tokyo.



➤ INTRODUCTION

Densification is essentially harmless to our health, and it makes possible for building walking-friendly cities, vibrant networks of public space, and bustling commercial corridors. We need to rebuild our trust in public space and density, and make better use of its shared value.

The public space of the future needs to focus on balancing the conflicting needs of the public and the individual: how could we create space for individuals to reflect and enjoy while providing opportunities for gathering and celebrating?

01 In history, pandemics have radically altered the way we think about cities. What could be the direct results of the COVID-19 pandemic in terms of changing our planning concepts and reforming the urban systems?

A public health crisis can leave its mark on cities and architecture. History shows that pandemics can radically alter the way we think about, move around and work in cities. For example, following the global cholera and tuberculosis outbreaks in the nineteenth century, pandemics have reshaped our cities, and some of these consequences included the introduction of new urban systems; for instance, in 1850, European cities introduced modern drinking supply and sewerage systems as a direct result from the devastating cholera pandemic. This is particularly relevant for public space.

Generally, I think that all urban planning decisions should be firmly based on criteria for public health and well-being. If the city doesn't make us happy and keep us healthy, it's not a place we want to live.

For centuries, **the promise of social interaction has always shaped our public spaces.** People are now asking: What will be the lasting impact from the COVID-19 pandemic on our public space, such as the famous Las Vegas Strip? During the 2020 health crisis, people everywhere have self-isolated, stayed at home and avoided contact with others. It is still unclear how exactly this pandemic will alter urban life and what exactly will be the impact from this crisis on cities and



Figure 1 Roof Gardens

their public spaces. But we can speculate and make some urban predictions of this post-COVID-19 future. **I expect that having a garden will become again more popular**, because when there is a stay-home order, life is simply so much easier if you can spend time outdoor in a garden. This could also be roof gardens.

02 Will this public health crisis shape new forms of homes and offices? What will be the impacts on work-life pattern and mobility in cities?

Firstly, I believe that there is a lack of leadership and expertise, especially at the local government level, where people are too focused on the short-term election cycles. The design solutions and technologies for urban regeneration and green cities are widely available, and there is usually enough funding available. However, still the transition to an age of the sustainable city is not happening fast enough due to the lack of leadership.

Architects have always been leaders in society, leading during crisis and developing a positive vision of our future. Some architects have already started to develop post-coronavirus design principles, envisaging how the design of workplaces, mobility and public spaces will change. Post-pandemic, **it is likely that our future homes will accommodate home offices and specific working-from-home areas**, while the open-plan office layout seems to be passé. In terms of mobility, **walkable compact neighbourhoods that are mixed use have clearly an advantage**, as these do not require to travel closely with others in a subway carriage or in a bus. **There is now also a revival of the bicycle in cities around the world.**

03 Do you think de-densification will gain popularity in future policy-making? Could you share some examples in the North American context, or in Europe or Australia?

An obvious question is in regard to density and mobility: How might our built environments—our cities, streets, squares and landscapes—transform to accommodate our conflicting desire for connection and mandate to social-distance during a pandemic? Urban planners will face the apparent tension between densification – the push towards cities becoming more concentrated, which is seen as essential to improving environmental sustainability – and disaggregation, the separating out of populations, which is one of the key tools being used to hold back infection transmission.

However, de-densification will not resolve the public

health challenges. Our car-dependent suburbs have just created a large number of other problems. In general, density is not bad for our health, as it enables walkable cities, an active public space network and bustling commercial corridors, which fosters health, makes communities more resilient and allows us to curb climate emissions. In all the discussion about the health risks of density, it is important to remember that urban density provides for health, resilience and space for informal activities that are integral to our society. **We will now need to rebuild trust in public space and density, and to rethink the types of public space and their role as spaces of shared values.** There are so many good public spaces that I love. Just to name a few, good examples for such recently created spaces are:



Figure 2 Buildings of Maitland Riverlink, New South Wales, Australia



Figure 3 Kings Cross Granary Square, London, UK



Figure 4 Ishigami's Biotop Water Garden, Nashu, Japan



Figure 5 Karen Blixens Plads Square, Copenhagen, Denmark



Figure 6 Plaza at the San Francisco Federal Building, US

All these are very different and I like them for various reasons.

In times of social distancing, it's important to remember that architecture is a discipline that can bring people together. The public space of the future will need to better balance the contradicting requirements between communal and individual: **how can we provide opportunities to congregate and celebrate together and, at the same time, to provide space for individual reflection and enjoyment?** Once the pandemic is over and life goes back to a "new normal", we will be able to enjoy again our public spaces for gathering and shared outdoor activities.

04 In your book of 'Urban Regeneration' (Palgrave Macmillan, 2019), you have proposed ten strategies for urban regeneration. Could you please comment on their relevance and adaptation under the current context and new changes?

My recent book on urban regeneration is a bold manifesto for transforming UK Cities in the age of climate change. The book offers guidance to planners, architects and decision makers on the complex process of how to transform cities. It is a 21st-century manifesto of urban principles, focusing on the characteristics of a 'good place' and the strategies of sustainable urbanism. **It asks readers to consider how we can best transform the derelict, abandoned and run-down parts of our cities back into places where people want to live, work and play.** The book also frames an architecture of re-use that translates and combines the complex science of cities and the art of urban and architectural design into actionable and practical guidance on how to regenerate cities.

Fascinated by the typology and value of the compact European city model, I introduce three urban concepts. Over the last twenty five years, I have developed three key urban concepts that are essential for my work, as these provide a clear framework for all my urban design and advisory roles, and these are further detailed in the book:

- The city of short distances
- The principles of Green Urbanism

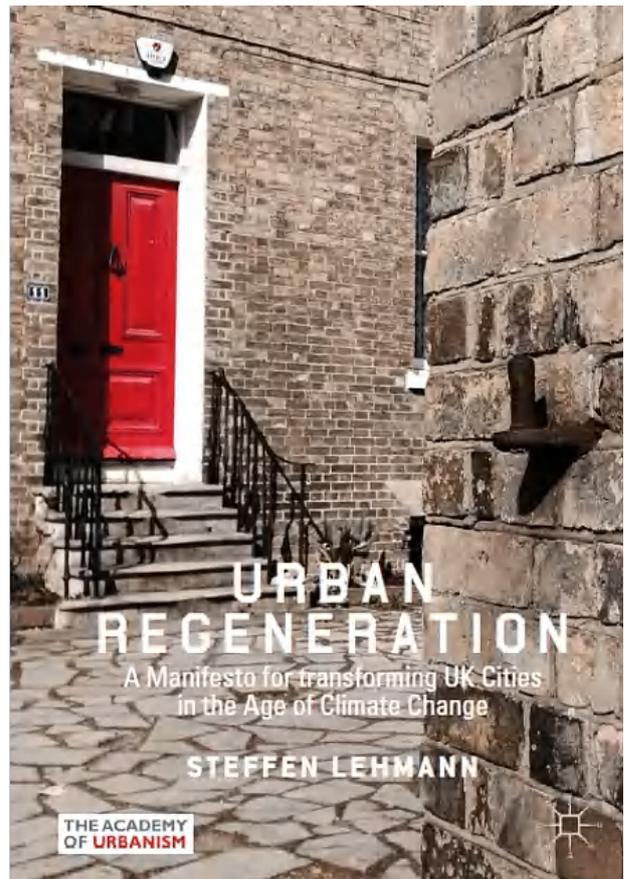


Figure 7 Urban Regeneration (Palgrave Macmillan, 2019)

- **Density without high-rise buildings**

The concepts provide solutions that will make our cities compact, walkable, mixed-use and vibrant again. In detail, the book presents a ten-point strategy for urban regeneration exemplified with 13 cases of UK cities. I believe that under the current context, the relevance, strategic thinking and adaptation potential of these ten points has become even more important: for instance, strategies such as **‘Public space as a catalyst for a better city’** , or **‘A public space network for a compact, mixed-use and walkable city’** , or **‘Thinking long-term and making the most of what we have’** – these are all timeless valid strategies that will always be relevant for us.

05

Could this crisis, despite the severe challenges it brings, also become a good opportunity to inspire and communicate a positive future of our profession?

This has been a very challenging time for many of us, including for the School of Architecture at UNLV in Las Vegas. Promoting the health and safety of our students, faculty and community, we made the early decision in March 2020 to enact online teaching for all courses and programs, to avoid the gathering of people on campus.

All our teaching and learning activities have been transitioned to online delivery mode (more information on the UNLV School of Architecture can be found here: www.unlv.edu/architecture).

However, **I also believe that we can turn this into a time for personal growth and rich learning.** It is important to inspire and communicate a positive future of our profession to our young graduates, and show that **there is a meaningful place for them to contribute in their own way to the future of America's architecture and its urbanization process.** The pandemic scenario has unfolded so rapidly that we still have to fully grasp the reality of the situation and its consequences.

New perspectives and outlooks may well be transformative for the school, its faculty and students. It is much more than working remotely and adapting to the online teaching and learning environment. Like during the Great Depression and World War II, **the COVID-19 pandemic (along with the climate change crisis) has altered how we think about the future economy, globalization, travel, tourism, the workplace and public space in the everyday situation.**

TOPIC VIII : LIVERPOOL EXPERIENCE

GUEST Prof Mark Boyle

Professor Mark Boyle is the Director of the Heseltine Institute for Public Policy Practice and Place at the University of Liverpool. The Institute brings together academic expertise with policy-makers and practitioners to support the development of sustainable and inclusive cities and city regions in the process of regeneration, including Liverpool City Region.

Professor Mark Boyle is a trained human geographer, his research pivots around urban studies and urban policy. In 2017, he was ranked in the top 50 most productive scholars in Geography and Urban Studies in the world across the preceding 20 years. He is also editor in chief of the Journal Taylor and Francis Journal Space and Polity.



➤ INTRODUCTION

In the face of the epidemic crisis, the post-industrial cities in the UK, represented by Liverpool, showed many urban problems such as fragile industrial structure, high unemployment rate, prominent psychological problems and ineffective data control. According to Professor Mark Boyle, director of the Heseltine Institute for Public Policy Practice and Place at the University of Liverpool, urban resilience is not only reflected in its ability to restore, but also in its ability to leap-forward and upgrade during the crisis.

We should be prepared to live with the virus for a long time. While actively fighting with the epidemic, we should think forward about post-disaster recovery. In addition, we need to pay attention to the value of the foundation economy and to think deeply about the necessary strategies for its reinvestment, so as to promote sustainable deindustrialization and urban renewal policies.



COVID-19 has now become a global crisis that requires intensive responses across nations, why should we take a future-oriented view and start to think about post COVID-19 strategies?

Thank you for the kind invitation to speak today. I hope you are all well at Suzhou, and congratulate the Urban and Environmental Studies University Research Centre and indeed all your colleagues at Xi’an Jiaotong-Liverpool University for the really great work you are doing around the COVID-19 outbreak and its aftershocks.

As you know, at the Heseltine Institute we too are actively COVID-19: Heseltine Institute Policy Briefs. COVID-19 presents one of the greatest public policy challenges Liverpool City Region has faced in a generation. We are drawing upon expertise from within the University of

Liverpool and indeed across the Liverpool City Region, **in collaboration with the Liverpool City Region Combined Authority to disseminate knowledge, best practices and translational research expertise** to help mitigate the present health crisis and its social, economic and environmental aftershocks, as to help the city-region build back better. You can find these at: <https://www.liverpool.ac.uk/heseltine-institute/covid-19policybriefs/>

COVID-19 is going to change the world. No question. There has been no crisis that has affected the world’s entire 8 billion population- every economic sector, every strata of society, every country- the prime minister of Britain has been diagnosed with COVID-19 and is currently in intensive care (* interview on 8th April). No one is spared. **The pandemic is a significant world historical event that is going to define a new generation of public policy and urban policy.**

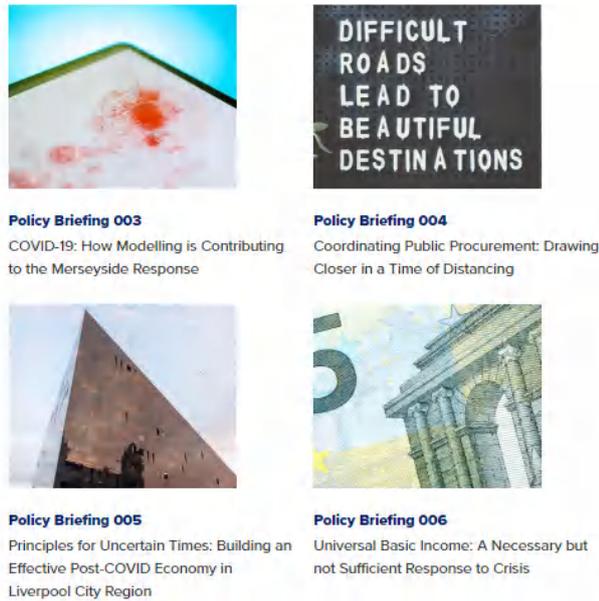


Figure 1 Heselntine Institute Policy Briefings (Source: <https://www.liverpool.ac.uk/heselntine-institute/covid-19policybriefs/>)

Meanwhile, it is not wise to think about COVID-19 being a temporary blip or a temporary set back and that we can just go back to normal life after. It is something far more instructive; it requires the whole world to reflect upon the model of economic development that is powering the world economy – we really need to think about the sustainability of this model. **A small virus has shown how fragile the whole interconnected global economy really is.** The way we do things needs to change moving forward.

There is a lot of work to be done in terms of the immediate emergency, including dealing with the health and health care crisis, reopening society following lockdown and returning to work in the coming months. But it is also crucial that we learn longer term lessons; once we get over this initial period of crisis and emergency we will need to build more resilient economies and cities.

The *United Nations Sendai Disaster Risk Reduction Framework* talks about ‘bouncing back better’ and ‘building back better’, and that ought to be the mantra of the world moving forward. **We need to remediate the COVID-19 pandemic and its aftershocks, but it would be criminal if we do not also start thinking now about how to better protect ourselves in the event of a COVID-20 or COVID-21 or indeed any other major natural or human induced hazard.** Threats are increasing and once in a lifetime events are now occurring three times in a decade!



Figure 2 Targets of the Sendai Framework (Source: <https://www.undrr.org/>)

02 Resilience is increasingly interpreted as more than simply helping urban systems achieve homeostasis, what will be the main challenges of speedy and sustained urban recovery, particularly in the post-industrial period?

Cities like Liverpool are perhaps not as resilient as other parts of the UK, especially London. We are only part way through a regeneration and recovery programme after deindustrialization – **we still suffer high levels of multiple deprivation and our population has poorer levels of health than the rest of the country.** COVID-19 has ruthlessly exploited our vulnerabilities. We need to build back better for sure. But what does that mean? Who owns the term build back better?

The concept of ‘resilience’ is central to disaster risk reduction. But what does building resilience actually mean? Resilience is understood variously in both academic and practitioner communities. This matters: framings play a crucial role in shaping the kinds of resilience building strategies which might be imagined and enacted. I use the term ‘resilience politics’ to refer to the differential consequences of different perspectives on how to build resilience in the wake of a disaster and against the backdrop of a looming risk or hazard.

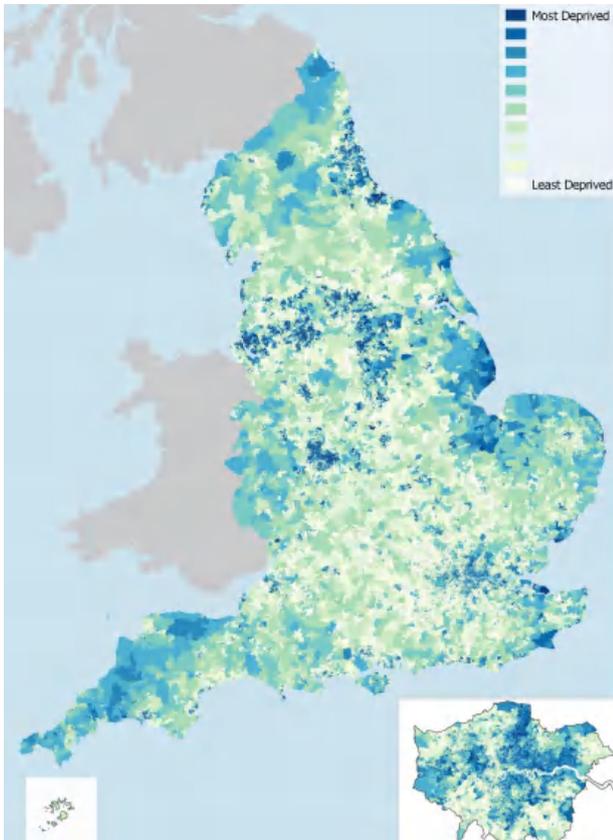


Figure 3 Indices of Deprivation, England (Source: <https://www.gov.uk/guidance/englishindices-of-deprivation-2019-mapping-resources#indices-of-deprivation-2019-local-authority-dashboard>)

When rebuilding cities in the name of strengthening resilience, civic leaders need to recognize that they are making political choices about the kind of future they are working to create.

Four ideas are in circulation: whilst not mutually exclusive each does focus attention and effort in distinctive ways.

Resilience as robustness: focusing upon the amount of shock a system can absorb and continue to function effectively and prioritising strengthening the resistance of systems to external disturbances,

Resilience as recovery: focusing upon the capacity of systems to return to a steady initial equilibrium steady state after a shock and prioritising solutions which help systems heal and repair faster

Resilience as reform: focusing upon the capacity of systems after a shock to adapt and evolve so that they are stronger than before and prioritising reform within the same politico-institutional norm.

Resilience as reconstruction: focusing upon the necessity of reconfiguring systems root and branch after a shock and prioritising politico-institutional transformation as the only enduring solution.

Each plays to a different resilience politics register. Clearly, robustness, recovery, reform and reconstruction all have strengths and weaknesses in different contexts. We need to decide which pathway we want to take.



Figure 4 A street of Liverpool in the epidemic period (Source: <https://www.liverpool.ac.uk/heseltineinstitute/>)

03

How to identify the vulnerable urban economies and what would be the key areas of attention in terms of bringing these parts of the urban economies back to equilibrium?

A common misconception about natural disasters is that populations most at risk are simply those unlucky enough to have been born in parts of the world where nature’s extremes are most manifest. Increasingly, it is being recognized that, whilst exposure to natural hazards is important, ultimately it is society that puts people at increased risk and, therefore, that solutions to natural hazards need to tackle the root causes of the social production of vulnerability to hazard events.

And so the formula **Risk = Hazard × Vulnerability (R = H × V)** has become of central importance in Hazards Research.

The University of Liverpool is currently funding the Heseltine Institute to undertake work on economic vulnerability. We are looking at **which sectors, communities, households and areas in the city are most vulnerable and at risk from the economic fall out of**

COVID-19. We are using the United Nations University's (UNU) definition of vulnerability is in the research.

The UNU begins with the formula $R=H \times V$, but then breaks down vulnerability into three component parts: **degree of susceptibility to hazards** (likelihood of suffering harm), **capacity to cope with hazards** (capacity to mitigate the impact of hazards when they do occur), and **ability to plan ahead to adapt to natural extremes** (ability to minimize the degree to which exposure to hazards is increased by prior poor human decision making).

According to UNU, social, economic, cultural, and political processes determine a society's degree of susceptibility, coping capacity, and ability to adapt.

Take Liverpool for example. As a coastal city and destination for tourism, Liverpool attracts many visitors, and **retail and hospitality** are very significant sectors. We expect that these will take a long time to recover from COVID-19 which makes the city therefore more vulnerable. Liverpool also has a high unemployment rate and those people who find it difficult to get into the labour market are going to be especially vulnerable now, because the competition for jobs is going to be even more severe than before.

We also concerned about the interruption of **supply chains** - can companies source the supplies and components they need to allow them to manufacture goods and provide services as normal. The fact that Liverpool ranks highly in multiple deprivation indices across Britain gives us particular concern. If people have low income and sparse resources (savings, wealth) a period of unemployment is going to be very distressing for them and their family.

All of this matter – being exposed to the Coronavirus is only part of the story.

04 **Coinciding with its 50th anniversary, the World Economic Forum launched a new Davos Manifesto in January 2020 on restorative and ethical capitalism. In this context, why should we recognise the pivotal importance of 'key workers' and the 'foundational economy' (social care, healthcare and education) in urban resilience?**

Capitalism is rightly considered to be a powerful economic system that energises entrepreneurship and

catalysis economic growth. Markets have taken billions of poverty. But market economies are beset with problems too. There is a recognition that **capitalism is creating huge inequalities that are manifesting themselves in the form of political populism in many countries - including in our own country with the rise of the Brexit movement.**

What for example has led to Trump (US), Hofer (Austria), Wilders (Netherlands), Hoffer/Kurz (Austria), Orbán (Hungary), Le Pen (France), Bolsonaro (Brazil), Syriza (Greece), Podemos (Spain)? The global economy is also causing huge damage to the environment as our climate and ecological crisis reveals.

I think the Davos World Economic Forum is recognizing that if capitalism is going to survive, it needs to up its game and more inclusive and clean growth is going to be the key to the future. WEF are starting to talk about 'stakeholder capitalism' as a new form of capitalism.

It's not particularly new. The United States in the 1940s-1960s started to look at **the impact of companies not just on shareholders but also on the wide variety of stakeholders they engage.** There is a growing recognition that there is a need for a triple bottom line with environmental, social and economic measures defining a company's success, not just shareholders' returns and profits.

John Fullerton, an ex-Managing Director of JP Morgan, talks about '**regenerative capitalism**'. It's the same kind of idea - making capitalism mimic the ecological systems active in the world rather than cutting across those systems, and trying to build a system that is in harmony with the environment and in harmony with human needs.

The idea of the '**foundational economy**' is also doing the rounds, stripping the city back to its basic elements, and recognizing that a certain number of jobs have to be done for a city to function. **These are often not the jobs that would be glamorous or particularly attractive to the higher class. They are often jobs in essential services, essential functions, and essential economic activities** – for example in supermarkets, logistics, hospitals, social securities and social cares.

Currently **key workers** are working and risking their lives whereas the rest of the professional classes are locked down safely at home. COVID-19 is starting to show **what the foundational economy looks like and why it matters**

and needs to be better supported. I'm hoping that after this crisis there will be a new respect for the foundational economy and for its key workers, and there will be proper remuneration and payment for these workers.

05 What would be the mental and well-being challenges to the public? How to engage urban psychology in reducing public health risks and promoting healthy cities?

Whereas the physical aspects of health are being given priority at the moment, the longer-term health damage done by COVID-19 will be on the people's mental health. **There are mental health problems that come from people being locked down, from key workers being exposed to the virus, and also from the elderly population staying home alone.** These will come home to roost at some point.

Lockdown is definitely a war on people's mental health, heightening levels of anxiety, depression, stress levels, nervous exhaustion and so on. It may lead to more substance abuse, alcoholism and drug abuse. **We are also seeing an upsurge in domestic violence, as people are being trapped in violent households, fueled by additional family stresses around dealing with added economic pressures and care burdens.**

Essentially, until a cure or a vaccine is found, people will be forced to live with COVID-19 – that means going into the world knowing that there is something lurking that could kill you and health professionals and medicines will not be able to save you. Think about that. A reality for every person who leaves the house. Of course, social distancing, testing, tracing and tracking can reduce the risk but it can't remove it altogether.

People need to socialize; this basic human need cannot be fulfilled when people are at a distance and are isolated from each other. **Digital contact is helping hugely but it is no substitute for human intimacy.**

COVID-19 mental health problems will be a huge health challenge for the world. **I believe this will be something we must properly deal with once the society reopens again or it will haunt us downstream.**

06 What is the relation between place-making with preventative public health? Does the English planning system provide any good lessons in this aspect?

To reopen effectively and build back better, it will be necessary to tackle the present crisis in mental health and to tackle the crisis in mental health it will be necessary to improve the psychological literacy of planners, policy makers and practitioners. Psychological solutions need to work with social and political questions centrally to the fore.

Psychology is often defined as the scientific study of the human mind. Psychotherapies target undesirable psychological states by building personal resilience – **including through cognitive behavioural therapy, mindfulness, meditation, talking therapies, exercise, diet, abstinence, sleep and medication** and so on. I believe each of these therapies has a crucial role to play in helping people cope with COVID-19. But cloaked in a scientific aura, institutional Psychology risks legitimating the idea that therapies must be targeted at abnormalities which exist 'under the skull'. In fact personalised therapies can only do so much in any given politico-institutional environment.

We can edge closer to a bundle of more fundamental solutions if we construe the present crisis in mental health as socially and politically produced. In tackling the crisis in mental health then, it will be necessary to 'fix' economies, societies and cities as much as suffering individuals.

In City and Soul, US Jungian psychoanalyst and urbanist James Hillman famously declared: **'to change yourself, change your city'**. Only by changing the organising principles around which our cities work will it be possible to create pro-social spaces and ecologies of care which are structurally therapeutic and life affirming.

We need a tradition of place making which taps into the formidable intellectual resources which already exist in communities, find a method to bring this knowledge to the fore, respect peoples' analysis of where they are at and why, dignify their concerns and ideas, entertain the solutions they propose and **champion policies which are authentically co-created, co-governed and co-implemented by planners, policy makers and practitioners and the communities they serve.**

07 Internationally, big data and smart governance tools have shown their strong potential in informing and improving public policies and services, why is it important at the same time to pay special attention to the ethics of big data management?

Obviously computerised data analytics have a role to play in tackling COVID-19. **We can use smart technologies to map the spread of COVID-19; we can use mobile phone data to warn people if they have been contacted with people diagnosed with the disease.** AI can help us model the future diffusion of the disease. Contact tracing is a powerful new tool that could make a difference.

But we need to be careful; the origins and development of smart technology within a framework of what Shoshana Zuboff calls **'surveillance capitalism'** has given rise to technology that is not only configured primarily to serve the interests of commercial data harvesters, but which is also substantially – and manifestly – under-regulated.

Problems arise not because of smart technology, per se, but because this technology is being enabled and constrained by a very particular politico-institutional dynamic – **a new mode of capital accumulation whose business model is the extraction of value from amassed linked personal data with little juridical, regulatory or ethical oversight.**

Computerised data driven solutions are actually essentially benign. Everything depends upon the political constitution of data markets, and the architecture of data ownership and sharing arrangements – specifically, how these arrangements are designed, regulated and governed, and whether they command a social licence.

We need to ask, how can health planners build and govern contact tracing apps that enable citizens to exploit more fully the powerful data revolution in a way which is democratic, ethical, underpinned by a social licence, and which maintains ongoing public trust?

We need to democratize the data, to establish a regulatory framework and **decide who is sharing the data, who is allowed to own the data, who is allowed to make money out of the data, and who is allowed to use data for certain aims.**

In this COVID-19 window, there are probably all sorts of uses and abuses of data going on – using the emergency situation as cover. **I suspect after this crisis, there are going to arise lots of questions about the democratic legitimacy of these uses.** Whether or not computing power and the data revolution will help us shield ourselves better from COVID-19 will depend upon the crucial social and political choices we will make today.

08 What should a high-performing data ecosystem be like? How to carry out a 'health check' of the current status of urban data system?

Fortunately, before the COVID-19 pandemic, Liverpool City Region was actively building a high-performing data ecosystem. The Heseltine Institute was centrally involved in this. Our health check was covered three areas:

The governance, management, ethics, and regulation arrangements necessary to set the **basic framework** (governance and management, governing for public good: building Smart Cities with and for citizens, governing data ethically)

The **technical infrastructures** and challenges which are fundamental for an integrated ecosystem (building Open Data ecosystems and fostering interoperability, investing in data infrastructure: hardware and software, data security, data visualisation)

Resources, finance and economics questions which need to be asked of data-driven ecosystems (financing models and procurement, cost–benefit analysis)



Figure 5 Liverpool Civic Data Cooperative (Source: <https://www.liverpool.ac.uk/heseltineinstitute/>)

In our view, the most significant innovation in Liverpool City Region's data governance to date is the pioneering **Liverpool Civic Data Cooperative** (CDC). The CDC is a partnership of eight NHS Trusts, Liverpool Clinical Commissioning Group, and four higher education institutions: the University of Liverpool, Liverpool School of Tropical Medicine, Liverpool John Moores University, and Edge Hill University. **It is working to develop an integrated data and digital innovation facility which supports collaboration between health tech partners and provides secure access to relevant data, while cementing trust from the public in how data is used.**

Accountability in data governance is safeguarded by elected members, and thus secured for the public within a 'diameter of trust'. Trustworthy national infrastructure is used wherever possible. Local communities work with NHS analysts, data scientists and health technology engineers to find new ways of improving healthcare and wellbeing, while citizen juries adjudicate on which datasets might be shared and which kept confidential.

When it serves the public good, the CDC will also open public sector datasets to private market actors with particular computer data analytic capacities.

We hope that the CDC will be helpful in overcoming the fragmented data landscape in Liverpool and already it is helping with the COVID-19 response. **Once we deal with this for health and social care, we hope then to replicate this model of data sharing in transport, climate, environmental and housing data-sets.** It would be wonderful if the city could eventually build all of those data-sets into a single data set, so we could then get a much better understanding of how people use transport, where they live, what their health status is, how many visits to the doctors they've had and so on. It would also very much help the planning and the management of the whole city.

Of course the essential objective is to **ensure tech and big data are being put to public good and that citizens are in control of defining what public good means.**

TOPIC IX : DIGITAL HEALTH

GUEST Mr Timothy Johns

Head of digital health China, Department for international trade, British Consulate General Shanghai. Former senior manager for KPMG Life science sector advisory business development. Member of the Association of the British Pharmaceutical Industry (ABPI) with MBA from Macquarie University. Supporting bilateral trade and investment of medical companies with ambitions to develop solutions in areas such as AI image analysis, clinical diagnostic decision support, online consultations, and remote patient monitoring.



➤ INTRODUCTION

In the digital health era, people's medical experience has undergone significant changes. The demand for epidemic prevention and control has forced related artificial intelligence technologies (such as contact tracking, video consultation, hospital information systems, etc.) to continuously update themselves. China has the potential largest healthcare market in the world. In recent years, many domestic traditional technology companies have also extended their business to the digital healthcare field. This session of the dialogue discusses the huge opportunities and challenges faced by this huge market, and proposes suggestions and visions of taking digital primary healthcare solutions as the first step in serving patients.

01 How would you describe the changes in medical experience as we enter an era of digital health?

One of the first things people usually dread about the thought of more technology in healthcare is the notion that there will be an unavoidable reduction in face to face contact with medical professionals. We have all become accustomed to trusting our doctors and can't imagine replacing that valuable human interaction with something more robotic, especially when we are feeling most vulnerable. **The psychological reassurance we get from physical interaction with medical professionals is often just as important as their medical opinion.**

On the contrary, digital health tools should actually enhance our human interaction with healthcare professionals, while improving medical outcomes and make our health systems more resilient. Digital tools should not only be able to provide clinical decision support, but also remotely monitor our health conditions and provide personalized recommendations with the

benefit of access to our personal electronic health record. When necessary patients can then be directed more accurately to a physician who will have more capacity, since non-essential face to face interactions can be phased out. **In effect allowing better quality face to face interaction with a real, qualified person when needed, not less.**

02 What are the main areas and forms of contribution that AI technologies can make to the epidemic control and prevention? Could you explain with some international examples?

• Contact Tracing

The speed of transmission of COVID-19 has left many to believe that traditional methods of identifying and tracing those infected or at risk of infection (contact tracing) is ineffective, but could be improved using contact tracing technology. Despite pleas from epidemiologists for detailed information on the whereabouts of infected people - which they believe is crucial for tracking and

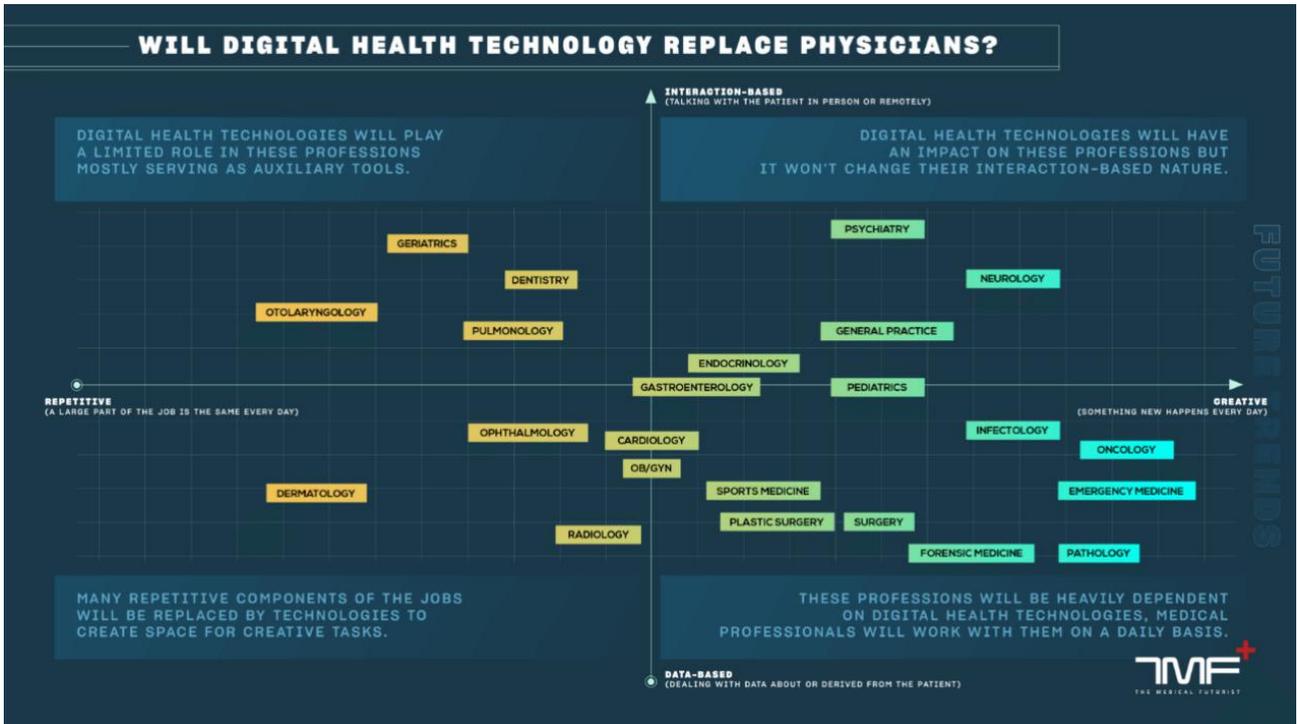


Figure 1 The Possibility of Digital Health Technology Replacing Physicians

controlling the epidemic, many are reluctant to surrender access to their data.

The traditional method of contact tracing relies on testing symptomatic individuals then conducting an interview to establish recent movements and those in close proximity (contacts), who are in turn tested and quarantined. However, this is tedious and inaccurate as relies on memory, leading to more transmission. Since it is estimated that up to 46% of transmissions occur from asymptomatic individuals, a more accurate and proactive form of tracing could improve the possibility of epidemic control, if used by enough people. In addition, by only sending notifications to only those at risk, epidemics could be contained with reduced need for mass

quarantines that are detrimental to the economy and society.

“The contact tracing mobile app concept is very simple. If you are diagnosed with coronavirus, the people you’ve recently come into contact with will be messaged advising them to isolate. If this mobile app is developed and deployed rapidly, and enough people opt-in, we can slow the spread of coronavirus and mitigate against devastating human, economic and social impacts.” [Professor Christophe Fraser, Nuffield Department of Medicine, Oxford University’s Big Data Institute]

Several countries have already deployed their own versions of the contract tracing app or are in the process

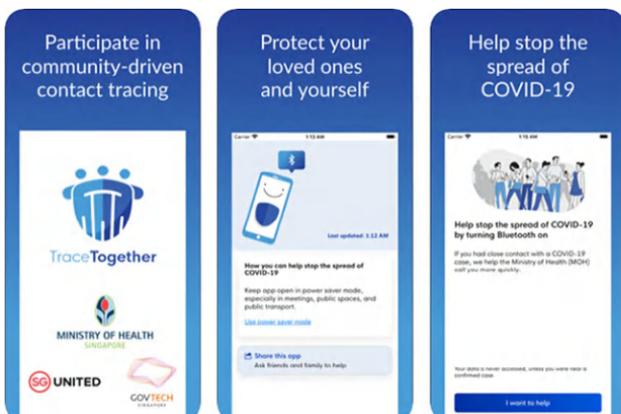


Figure 2 Trace Together



of development. Although the underlying principle is the same, **the methods used to execute, speed of development and ultimately their effectiveness will vary due to many factor including cultural differences on privacy and how personal data should be handled particularly by the government.**

Trace Together, contact tracing app launched in Singapore, avoids storing user data centrally and uses blue tooth to record proximity to other app users, helping to protect patient privacy.

• Video Consultation

For the many people quarantining at home, this meant they were unable to visit their normal medical provider and for those with medical needs, the means of obtaining professional medical advice became a challenge. This problem was recognised by many digital healthcare providers, and they sought to find a solution. In China Ping An Good Doctor saw a spike in recorded users of its online consultation service and this has no doubt added much needed capacity to the healthcare system. **The volume of online consultations in China has grown from 30m in 2012 to 148m in 2016, representing a CAGR of 49%, but this still only accounts for ~2% of all consultations performed in China.** During the epidemic most of the online consults were provided for free. In the UK, Babylon Health has 'GP at hand' and launched a customized covid-19-care-assistant (<https://www.babylonhealth.com/coronavirus/covid-19-care-assistant>).



Figure 3 Customized COVID-19 Care Assistant Service of Babylon Health

• Hospital Information Systems

Our limited knowledge of this new virus, is one of the reasons for the global spread of COVID-19. Amid the outbreak, credible, up-to-date and practical information was incredibly important for healthcare professionals, policy makers and the public. Along with an awareness and understanding of the symptoms, in order to quickly diagnose, and provide the appropriate treatment required.

In order to help healthcare staff provide care for patients, understand the latest research, have the professional knowledge to accurately diagnose, and provide the most suitable treatment, the BMJ Publishing Group (a professional medical knowledge provider, owned by the British Medical Association) issued over 10 COVID-19 related, special resources (<https://www.bmj.com/coronavirus>) for clinicians. These resources are in multiple formats and cover areas such as a **'best practice clinical decision support tool'** (https://bestpractice.bmj.com/info/coronavirus_covid-19/), **interactive learning modules on infection control and protective equipment, clinical research and education – with topics including, 'a guide for doctors'**. These BMJ resources are available to healthcare staff worldwide and free of charge, so that all healthcare providers can have access to evidence-based, expert medical knowledge, at any time.

These specialist resources are based on collective, global evidence-based research, and the guidelines relating to COVID-19. Before they are published online, they are carefully reviewed, screened and evaluated by professional teams, in order to extract the required detail needed for accurate diagnosis and treatment, which in turn directly guides clinical decision-making. These resources are analysed by experts, and undergo a rigorous peer review, before they are made available to healthcare professionals.

This tool enables healthcare professionals to access up-to-date information, enhance their medical knowledge around COVID-19 and supports them in providing a timely, accurate diagnosis and the best treatment solutions for their patients. To date, these specialist resources on COVID-19 have been viewed over 300,000 times worldwide.

03 In your previous article you list many Chinese companies launching digital health technology. What are the main opportunities and Challenges?

There are many opportunity areas in China. A recent study by Morgan & Stanley has forecasted the Internet health industry to be worth RMB50 Billion by 2022 and RMB200 Billion by 2026. Many of the segments are well covered already by familial Chinese tech companies. **Lack of insurance coverage has been a challenge in the adoption of online medical services especially for fee-paying services. However, broadening of insurance coverage in terms of geographic region, disease categories, and medical service type has occurred recently.** In February 2020 National Health Commission

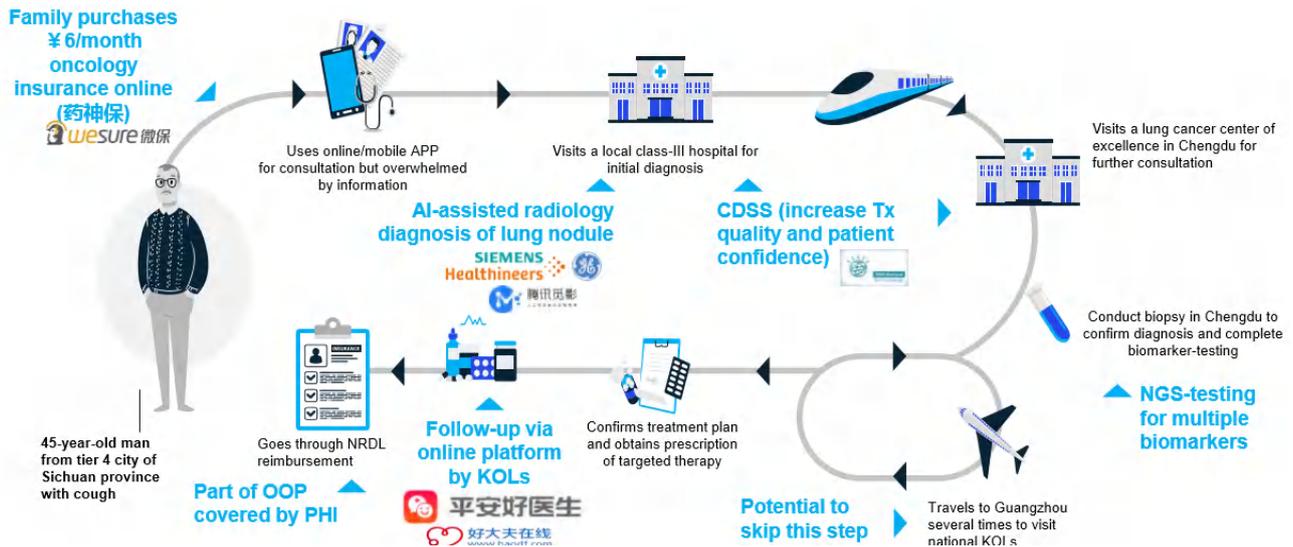


Figure 4 Oncology Enhanced Patient Pathway

issued an approval notice to promote internet-based healthcare services for online consultations, e-prescriptions, online patient education, and internet hospitals.

One of the best ways to see the impact of digital health is when viewed from the perspective of the patient journey, particularly in NCD's (Non Communicable diseases) such as cancer. **Using AI image analysis and CDS (Clinical decision support) tools with telemedicine for second opinions and video consultations for patient follow ups that are all integrated to the electronic patient record can increase accuracy, save time, reduce costs and improve medical outcomes.** This can be done in parallel to incentivizing the training and recruitment of GP's across China.

04 You have said that China is one of the world's biggest potential healthcare opportunities. How can China realize this and how can the UK help?

China has a huge opportunity to lead the world in digital health. Since it has many of the elements for its effective wide-scale application. **Lots of data, strong IT infrastructure available to most and a culture that quickly adopts new technology.** Philips future health study, already rates China#1 in digital health use. However, there are still areas that need to be carefully developed.

Currently too many Chinese patients rely on too few AAA (Class iii) hospitals. China central government

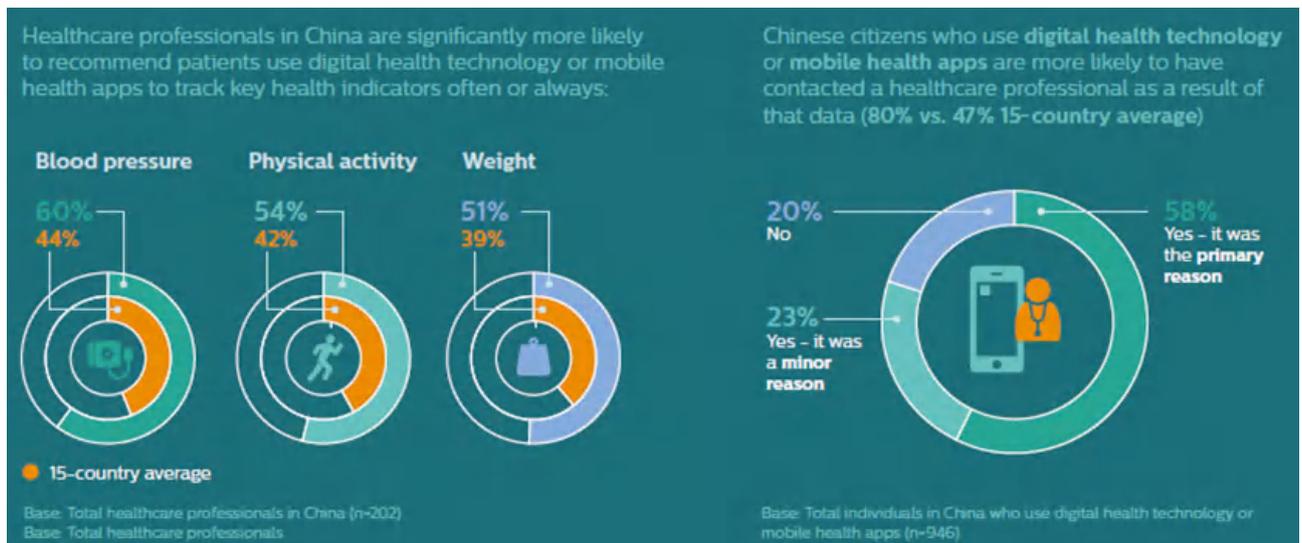


Figure 5 Current Percentage of Health Professionals Using Digital Health Technologies or Mobile Health Applications (Source: Philips Future Health Study, 2019)

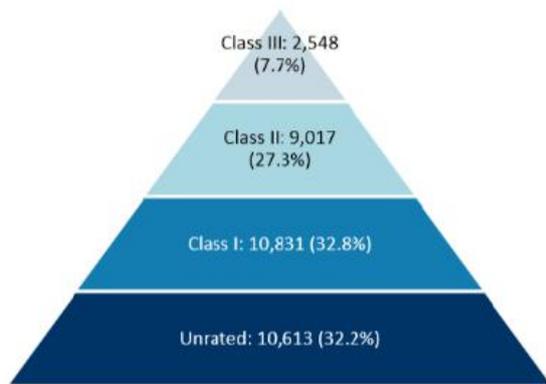
has recognized that it needs to develop its primary healthcare capabilities to help monitor and triage patients rather than everyone heading to the big city hospitals. Traditionally this would require GP medical training and building physical clinics, which is underway, but is time and investment heavy.

Alternatively, China can use technology to implement digital primary care solutions such as online consultations as a first line for patients. A key component of implementing digital solutions is **Health Informatics. This is a discipline that refers to the capability not only to gather and store healthcare big data but also to have access to the latest clinical expertise and standards that allow you to make the appropriate medical decision.** The UK has deep expertise in Health Informatics and this is a popular theme at several conferences in China lately.

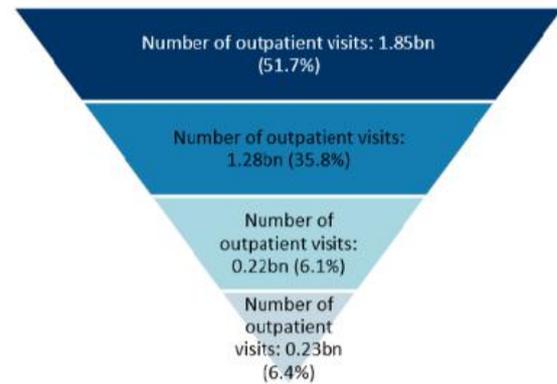
The World Artificial Intelligence conference WAIC in Shanghai on July 11th is China's largest annual AI

technology conference and the COVID-19 epidemic was a major theme. "Intelligent Connectivity- Shared Health" A dedicated health industry forum, organized by CAICT gathered global experts from industry and academia to discuss a range of themes. Professor Richard Hobbs, head of applied digital health at Oxford University gave detailed account of the broad benefits of an integrated EHR that incorporates comorbidities and screening initiatives. This presentation was well received and also shown on Shanghai local television.

Further, the **UK-China Health and Medical Big Data Forum will be held On August 16th in Chongqing.** It is organized by the BCSHI (British Chinese Society of Health Informatics), Chongqing Institute for Intelligent Healthcare and Population Health Research, The Medical Informatics Department of Chongqing Medical University, Chongqing big data application and development administration, and Chongqing Economy and information commission.



Source: WIND, Morgan Stanley Research.



<5% time of a hospital visit is dedicated to diagnosis

Of which only 8min is spent on diagnosis, (4.4% of the time)

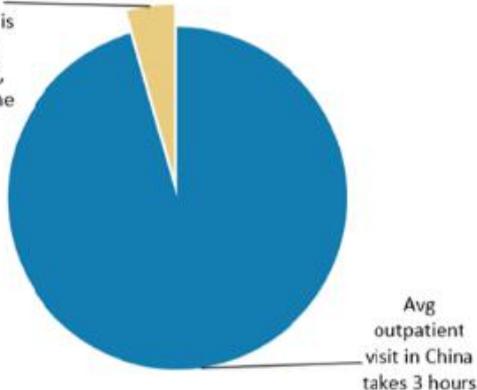


Figure 6 Unbalanced Medicine Resources in China

TOPIC X : 21ST CENTURY CRISIS

GUEST Dr Geoffrey O'Brien

Associate Professor of University of Northumbria, Former Lord Mayor of Newcastle, Dr. O'Brien has retired from the City parliament in 2019. During his term of office, through the formulation of energy policy, the construction of low-carbon city and the promotion of green technology, Newcastle has become one of the most sustainable cities in Britain and even Europe, and enjoying a high reputation in Europe. His book *The Future of Energy Use* is now an essential bibliography for UK energy policy makers. In China, he also directed the Youth Olympic Games · Nanjing 58 km long waterfront scenic belt renovation project.



► INTRODUCTION

In the face of major crisis like diseases, the environment, energy and other important issues, we need to give full play to the top-down design of the government. And it is important to stick to the inherent laws, remove institutional obstacles, and stimulate grassroots motivation. Dr O'Brien, who had served as mayor of Newcastle, UK, shares his personal experience - the key to the success of local projects is the long-term commitment and funding from the central government. In the future, the promotion of urban reform and the effective implementation of urban strategies would also depend on the cultivation of talents with professional qualities and understanding of the operation mode of the government.

01

Comparing China and UK/Europe, what would be the transferable lessons that we can draw from dealing with COVID-19?

What we have learned is that COVID-19 originated in the animal community and because of our increasing proximity to wildlife, similar pandemics are likely to be more frequent in the future. China was a little slow in making the pandemic public and this meant that people infected with disease were able to travel. When the Chinese authorities recognized the seriousness of the problem, they acted quickly and quarantined the affected areas. As the disease spread, many countries adopted the same approach, for example, EU nations such as Italy, France and Germany. The UK was a little slow and at first decided to adopt a “herd-immunity” approach. This idea was dropped when scientists estimated that this would lead to some 250,000 deaths. The UK then adopted the social isolation and quarantine approach that many countries had taken.

Sadly, the UK was not well prepared. There was a

shortage of Personal Protective Equipment (PPE), Intensive Care Units (ICUs) and ventilators. There are estimates that the current death rate of over 40,000 would have been much less if the UK had acted more quickly.

At present the number of infections and deaths is falling and the lockdown will be partially lifted in the near future. The UK government is very keen on stimulating economic activity. It is also keen on developing “Test and Trace” facility so that future cases can be easily tracked. Some have pointed out that WHO has a system and that it would make sense to use that as opposed to developing a new system. So what can we learn from this?

First, **we need to ensure that further outbreaks of a pandemic are quickly made public.**

Second, **we should have a standard approach to dealing with an outbreak.** It does seem that quarantine is a good approach. Nations should work through the UN and WHO

to develop guidelines for dealing with outbreaks.

Third, **we need to have guidelines of the levels of PPE that should be kept in storage.**

Fourth, **we need to have a standardised Test and Track system.**

02 It has been recorded around the world that pollutions have been declining from pandemic shutdowns. What are the new opportunities it has brought about for climate researches?

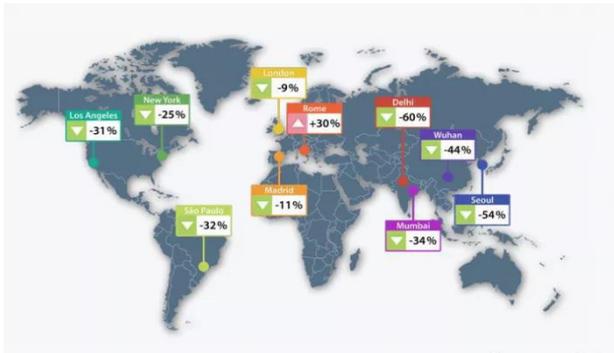


Figure 1 Changes in Air Pollution Levels in Major Cities around the World during the Lockdown (Source: IQAir)

Sadly, as lockdowns have eased, pollution levels have increased, particularly vehicle pollution. We did use less energy during the lockdowns but governments across the world are keen to restart economies. This will mean that energy use will increase. **Both energy suppliers and producers will want to grow the market back to its original size. Governments will want the taxation income associated with energy.** I do not believe that the recent shift will encourage new research into climate change. It is highly likely that current research will continue.

Governments across the world will want to grow employment – this both increases taxation income to government and simultaneously reduces welfare spending. Many governments are concerned about increasing national debt driven by the pandemic. So, it is very unlikely that public money will be made available for climate research. It may be the case that business might fund additional research. However, what is more likely is the plans that BP have will be taken up by other oil suppliers and producers. They plan to stop using oil in ten years. They plan a shift to gas and renewables. It is likely that others will do the same. **However, there may be some interest in exploring how climate change can bring fauna and people closer.**

03 What are the practical challenges for policy-making to promote sustainable Local Agenda 21? Could COVID-19 provide a chance for this?

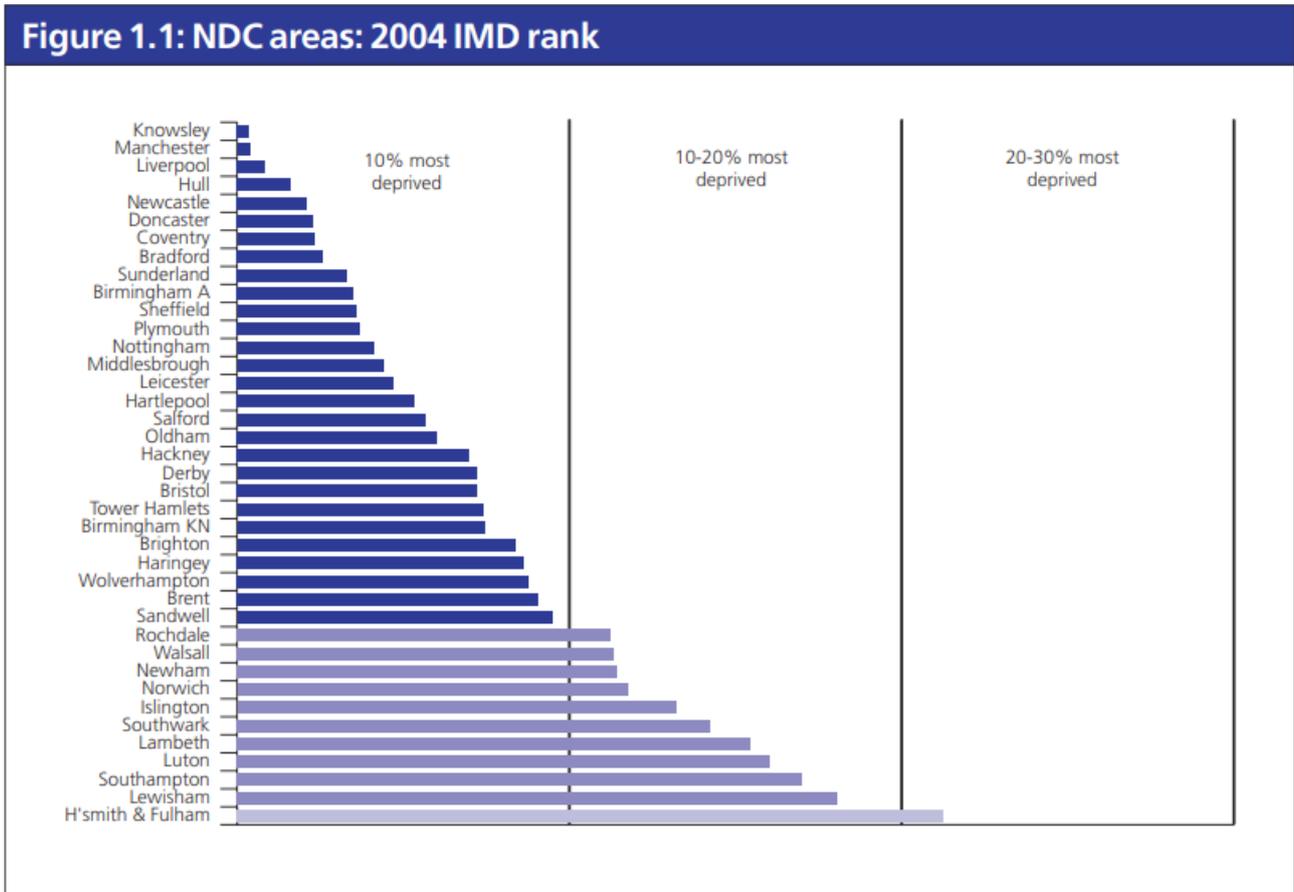
I tried to implement Local Agenda 21 in Newcastle. There was little support. The reason I believe is that business and individuals need to see economic improvement driven by a green agenda. Most people perceive that the green agenda will lead to additional costs. We need to work on how being green will benefit individuals and society as a whole. COVID-19 has shown that environmental improvement can occur but essentially the focus has been on how lonely many people feel in lockdown.

In the UK the building standards for housing are the lowest in Europe. By improving the insulation standards and introducing renewable technologies such as roof mounted solar water heaters and air source heat pumps. These type of upgrades will be done by home owners. But we found a general reluctance because of costs and a perception that returns would be low, and that climate change was not a problem. The following table shows that the **percentage of owned housing is quite low.** The majority of housing is rented. It is up to the landlords to introduce improvements. The council was very interested in making improvement and did so where it could. **However, the vast majority of other landlords were only interested in rental income.** In short it was problematic.

TENURE	NEWCASTLE UPON TYNE	ENGLAND
Owned	22.4%	30.6%
Mortgage	27.1%	32.8%
Shared	0.4%	0.8%
Social Rented (Council)	23.3%	9.4%
Social Rented (Housing Assoc)	6.4%	8.3%
Private Rented	17.5%	15.4%
Other	1.6%	1.4%
Rent Free	1.3%	1.3%

Figure 2 Housing Ownership Data for Newcastle and England

04 How could platforms such as city information modelling and cloud monitoring for energy use contribute to guiding the design and development of sustainable cities. Could you share your experience of leading similar projects in Newcastle?



Source: SDRC

Figure 3 New Deal for Communities Areas: 2004 Indices of Multiple Deprivation Rank

Yes of course, such models can contribute to promoting sustainability. I found leading projects in Newcastle very challenging. The one I was most successful was New Deal for Communities. The main reason was that central government providing funding over the ten years of the project, we were able to make real changes. In short, we need to have government commitment and funding. However, at present there seems little likelihood of governments providing real funding to support dramatic changes to our cities.

This the website for New Deal for Communities

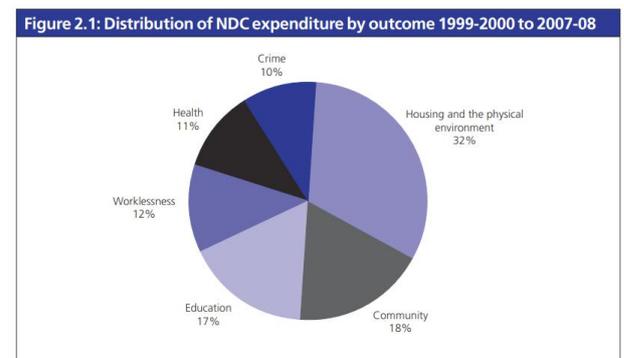
https://en.wikipedia.org/wiki/New_Deal_for_Communities

During New Deal we agreed to establish a charity to carry on new deal work after the ten-year programme ended. We named the charity Centre West. I sat on the board until 2019 when I retired from the Council.

<https://www.centre-west.com/>

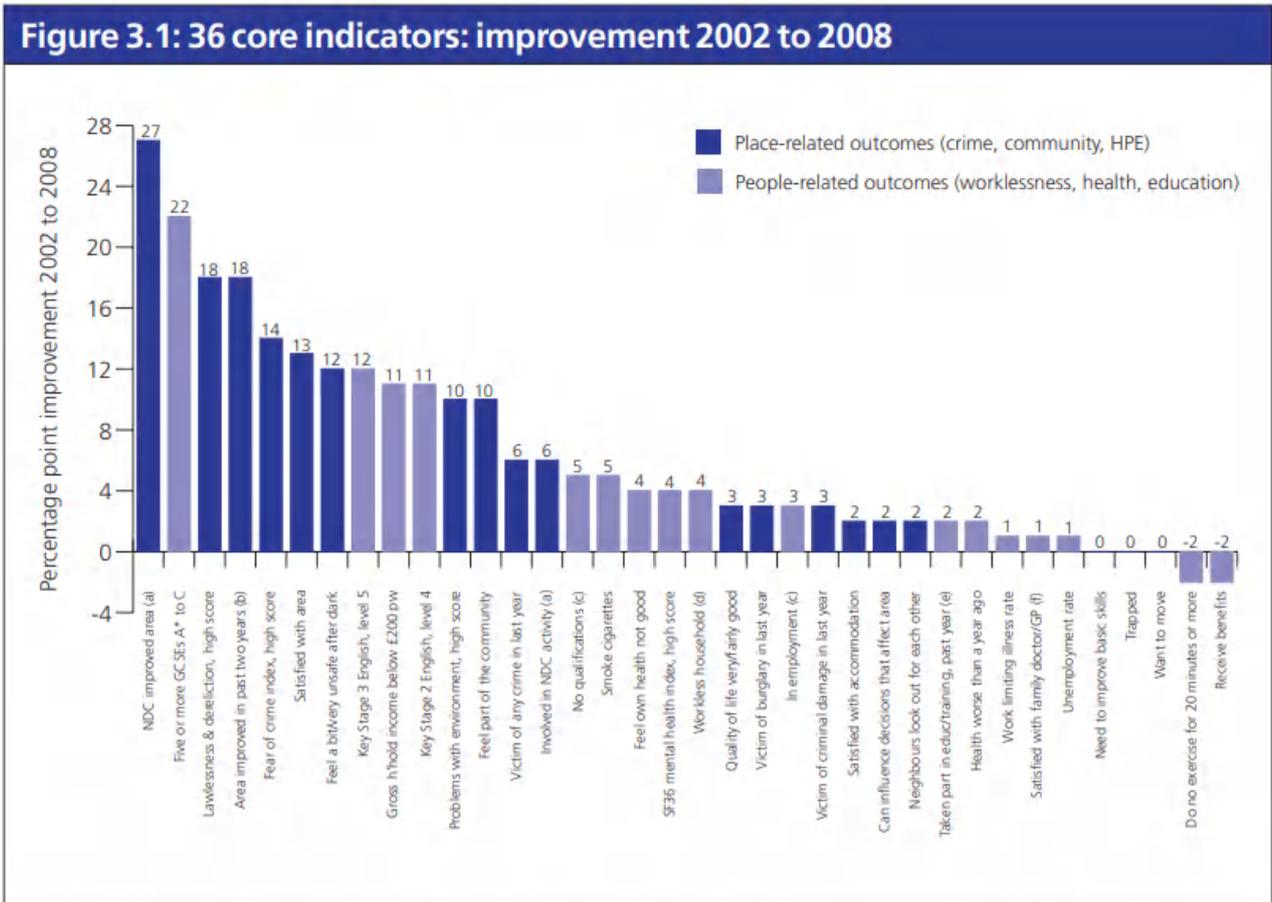
The following is a national evaluation of the whole New Deal programme.

<https://extra.shu.ac.uk/ndc/downloads/general/A%20final%20assessment.pdf>



Source: CEA analysis of System K data; Note: Management and administration spend is excluded.

Figure 4 Distribution of New Deal for Communities Expenditure by outcome 1999-2000 to 2007-2008



Source: Ipsos MORI NDC Household Survey 2002-2008; SDRG; Base: All; (a) All heard of local NDC; (b) All lived in area two or more years; (c) All working age respondents; (d) All working age households; (e) All working age not currently in full time education; (f) All seen GP in last year; All indicators have been standardised so that a positive score indicates improvement and a negative score indicates deterioration

Figure 5 36 Core Indicators: improvement 2002 to 2008

05 As the pandemic may not be put under control in short time period, how do you foresee its impacts on the work-life pattern in cities and changes in designing the build environment accordingly?

It is likely that there will be a greater shift to home working. This does not mean that business placed work will cease. But it will mean that demand for transport and business may well reduce. This is likely to mean less demand to develop new business spaces and less investment in upgrading transport systems. In the longer term there may well be more development of city residential accommodation. That will have implications for schooling and shopping for example. **Cities are likely to be more family oriented.**

06 Given your rich experience as both academic and city leader, what would your advice on future education to cultivate the youth with leadership and expertise?

This is a tricky question. In terms of education we need to have a greater focus on environmental issues. But we also need to involve pupils and students in a variety of environmental projects. And we also need to ensure that there is a greater understanding of how governments work. In the UK for example, there is little education on how government works. Younger people need to know how they can access funding and expertise to support a project they might like to undertake. It's never quite as straightforward as one would think. Learning about process is important.

TOPIC XI : URBAN REDEVELOPMENT

GUEST Dr Yawei Chen

Dr Yawei Chen is an assistant professor in Urban Development Management at Department of Management in the Built Environment, Faculty of Architecture and the Built Environment, Delft University of Technology, the Netherlands. She developed her expertise in understanding the development strategies and governance innovation in cities using urban mega projects to pursue industrial transition towards a knowledge-based economy. Her studies cover urban transition strategies, land policy, financialisation, public-private collaboration, community participation and sustainability of the urban mega project in Chinese cities. She is a regular speaker on governance and planning strategies in Chinese urban transformation and is an active reviewer for more than ten key international journals related to urban studies. She has been involved in various academic research projects that examine the development of sustainable urban mega projects in European-Chinese comparison studies.



➤ INTRODUCTION

Most cities are facing capital shortage when carrying out urban redevelopment projects, effective financing could therefore provide security for the success of future projects. In the context of inventory development, the regeneration of marginalized urban areas and waterfront areas with complex jurisdiction, as key breakthrough areas, will face many challenges. Moreover, the global spread of COVID-19 and its impact on local economic development have put more pressure on regeneration projects that had struggled to attract investment. In order to adapt to the new socio-economic forms and its complex requirements, there will be a growing need for innovative financial instruments, diverse participants and flexible mechanisms. At the same time, effective response should be prepared to tackle new problems such as social disparity, risks brought by financial instruments and financial market fluctuations. In this dialogue, Dr. Chen from Delft University of Technology is invited to share the experience and practice of the Netherlands. Based on the case of large-scale waterfront redevelopment project in Shanghai, it intends to make a detailed interpretation of the new trends as well as problems of the current urban redevelopment practice.

01 Why it is important to finance urban redevelopment, in the new context of post COVID-19 inventory development in old urban areas?

In cities, urban development is carried out to change the nature of a place, often with the intention to improve the built environment and improve the quality of life of the urban area. It contributes to develop a city’s comprehensive vision, improves the physical, economic and social condition of a city therefore enhance the competitiveness of the city. **By financing urban development project, we could improve the physical living condition, create opportunities to generate government revenue, create jobs and improve community facilities and amenities.** Urban regeneration

has been carried out for several decades. Often the earlier urban development regeneration projects targeted urban area that were better located and had less physical, environmental and social challenges. Later we see more and more projects started to address more marginalised urban areas, with various social-economic disadvantages and more risks for investors.

In the new context of post COVID-19, transformation of the old urban areas become even more essential. Because of lockdown and other measures to curb mobility and contain the infection, people are confined mostly to their home and 1500 meters around the neighborhoods. Local governments recognize that **there is an amplified effect on social disparity that has the urgency to be addressed, like the quality of living space, easy access**

to green spaces, public transport, healthcare, access to technology and internet for socially vulnerable groups.

Furthermore, many cities currently are facing housing shortage and increasing demand for housing with better housing quality and bigger space. In the Netherlands, government, property developers and policy researchers are all examining the claim of one million home shortage in the domestic market, especially in bigger cities. Despite the constraints, the old urban areas in cities, whether in declining dilapidated urban condition or industrial legacy with serious physical environmental problems, provide possible land for housing and other property construction. That is also the reason why some of the major urban development projects in the Netherlands, like the transformation of industrial Binckhorst area in the Hague, were carried out continuously.



Figure 1 Transformation of industrial Binckhorst area in the Hague (Source: Hague Municipality Netherlands)

02

Why the waterfront locations are more difficult to attract and sustain investments? What are the main approaches of international experiences?

For most of the waterfront with an industrial function, the territory was isolated from public access. There may be unfavorable conditions or poor structure and facilities because of proximity to water. Furthermore, these areas have mostly faced severe environmental challenges and a lack of infrastructure. In recent years, waterfront redevelopment has involved various measures to deal with emergent challenges not previously focused on, like social integration, social equality and community participation. Beyond these spatial, environmental and social challenges, carrying out waterfront redevelopment remains challenging. Waterfront areas have a fragmented and complex structure of jurisdictional involvement. Different stakeholders may have to deal with a multitude of government regulations and permit requirements. As most waterfront development takes a long period to be

implemented, such projects require massive financial investment. The public sector cannot carry out such projects alone, while private investors hesitate to invest in waterfront redevelopment projects due to the high risks.

These challenges need to be dealt with in partnership with public authorities, private organizations and community groups.

Most of the waterfront redevelopment practices reflect the result of evolving port-city relationships and associated processes of de-industrialisation



Figure 2 London's Canary Wharf (by Yawei Chen)



Figure 3 Guggenheim Museum in Bilbao as a catalyst for the waterfront transformation (website: <https://www.guggenheim-bilbao.eus/en/the-building>)



Figure 4 Olympic Event as catalyst for Barcelona waterfront redevelopment (website: <http://urbanwaterfront.blogspot.com/2011/01/barcelona-event-as-catalyst.html>)

and globalization. Waterfront is transformed from industrial to urban function. **Many of the waterfront were designed as high-profile, flagship projects with prestigious land and property developments**, like CBDs, stadiums, exhibition halls, opera house, luxury shopping malls, high-end hotels or housing development. They often play an influential and catalytic role in the urban transformation of a large-scale waterfront development. Commonly-cited examples include London's Canary Wharf, Guggenheim Museum in Bilbao and Barcelona Olympic waterfront. **In this way, the cities hoped to attract more private investors and investment, especially global investment. These practices have been copied in different locations but also received critics due to greater spatial and social-economic polarization.** In recent years, new practices tend to involve more local communities and existing land or property owners in the transformation process. Besides, attempts have been made to upgrade the industry or bring in high-tech or creative industry in the waterfront transformation. In addition, they strive for private investment and public-private partnership, with actors emerging from diversified background from financial actors to community funds.

03 **What are the pros and cons of land-based capital accumulation being central in the financialisation of urban redevelopment projects?**

The condition for the land-based capital accumulation is that land belongs to the state, as is the land tenure system in Chinese context or the four bigger cities in the Netherlands (namely Amsterdam, Rotterdam, the Hague and Utrecht). **Financialisation has gradually come to play an important role in China's urbanisation because that most cities are facing capital shortage when carrying out urban development projects.** The pro is that the cities in China, while being in shortage of budget to invest in transforming urban environment, have the possibility to accumulate the capital needed for further urban transformation in the city. Land leasing is an important revenue for the local state and an important source of investment in public space and infrastructure projects.

On the other hand, **because the state has a vested interest in dominating land development, land-based capital accumulation may push cities to excessively convert arable land to construction land for extra revenue and sell them in an unconstrained manner. This could lead to a conduct that may not take into account of the Cities' long-term sustainability development.** In fact, some cities have already faced the scarcity of land resources in future urban development

which will greatly affect public treasury. Furthermore, rules need to be set to allow land to be conveyed in an open and fair market and prevent the misallocation of land revenue to individual officials and work units (using the land or having special network).

04 **Do you think that conversion of land use types will be more widely used in Chinese cities? What are the institutional conditions and restraints that it needs to cope with?**

If you mean the conversion of land use types is the practice of changing land use from rural to urban functions or changing from industrial to commercial and residential functions, yes you will see such practice more widely applied in the coming years in Chinese cities, as you see the same practice in European cities in the last several decades. With China's urbanization continues at a rapid speed in the last 50 years, there is a growing urgency for Chinese cities to take care of the land resources at central and local levels. One reason is that the rapid loss of cultivated land resources due to rapid expanding of urban construction land and the increasingly concern of food security and other environmental consequences. Such concern has driven China to adopt stricter and more effective arable land protection policy by the central government to cherish land resources, ensure rational use of land and effective protection of farmland. **At the same time, there are still large land parcels in existing urban areas that can be mobilized to capture land value by selling or leasing land development rights. In the Netherlands, the so-called 'SER ladder' (the Ladder for sustainable urbanization) is used to promote the optimal allocation of land.** It means that the need for the new development must be examined. Further, if the development is foreseen outside the existing urban area, it must first be examined whether the development could (partially) be accommodated within the existing urban area. Dutch municipalities apply the SER ladders in the spatial planning of, for example, business parks, living or retail area, taking into account the possibilities of restructuring and intensive use of space.

Development-based land value capturing has certain advantages: it can generate massive capital to finance capital-intensive transformation without significant fiscal distortion or public objection to additional tax or fees. It may increase both one time and long-term revenue from high-transit ridership. The accommodation of new urban function of retail, office, housing and higher-quality public space or improved built environment can

help generate sustainable income for local government, reimagine existing areas often with bad stereotype images, create job opportunities and attract new users. In my paper *Financialising urban redevelopment: transforming Shanghai's waterfront*, I examined four waterfront redevelopment projects in Shanghai during a period of thirty years (1990-2020): the Lujiazui Financial District, the 2010 World Expo site development, Xuhui West Bund and Yangpu waterfront redevelopment. What can be concluded from the research is that **value capture came through the change of land-use from industrial to high-end commercial/residential function.**

The redevelopment of urban areas with existing properties and functions and the development-based land value capture is designed and developed around the intensive collaboration of all involved stakeholders like the different organizations of the government at different scales, land owners, various property developers, current industries, enterprises and residents. Increasingly, new actors emerged in the transformation process, like pension funds or energy companies. For example, a series of studies have shown that pension fund has been found in urban revitalization project, infrastructure development and housing projects in Australia, Canada and EU countries. With so many stakeholders with diverse interests, it is important that **local institutional framework and legal context provide flexibilities to experiment for collaboration in some form between the public and private sector.** In the development of Lujiazui Financial District, the use of special economic zone status provided institutional context to accommodate global investors and global investment. For example, tax exemptions and deduction were widely applied. Bonds were allowed to be issued to raise fund for infrastructure development. Various institutional reform allowed the use of development instruments like the public-private partnership in various development projects. Besides, it is increasingly essential to involve the existing communities, be it business sector and local residents, in the decision-making process to co-create the future vision of the urban area. In this way, a consensus can be reached without dramatic negative social consequence. Consequently, the redevelopment process takes time and mass investment to realize its goal and may face various unexpected obstacles. **Planners and project managers working in the public sector need to consider themselves more as place-makers**, as Adam and Tiesdell (2013) suggested. **They need to improve their understanding of the market and the dynamic of real estate development, and develop their market-shaping mindsets and learn various skills in developing network with other market parties.**

05 What are the emerging innovative financial instruments (e.g. bonds, funds, partnerships) and the new problems arising from the increasing complexity of multiple participants (institutional and individual investors, banks, and companies as end users) in urban redevelopment projects?

The European Union (EU) states the development financing as measures that provide financial support to address policy objectives through the use of loans, guarantees, equity or quasi-equity investment, or other risk-bearing tools. These financial instruments can be combined with grants and involve risk-sharing with financial institutions, or a blending of loans and grants, or can be in the form of development charges or land value finance. Theurillat et al (2017) suggested tracing the bank and direct financial circuits (e.g. development loans, housing mortgage loans and own funds) as well as the financialized circuits (e.g., special purpose vehicles like trust and funds or financial platform and capital market) to understand the financialisation of the property development industry in China. As Chinese cities started their ambitious urban (re)development process since the 1980s, most municipalities faced a serious budget shortage. In the development of Chinese large-scale urban development projects, we have seen **a continuous increase in the amount of investment from domestic and international sources that are injected into the region, as well as the arrival of multinational corporations, the banking and financial sector, property developers and global pension funds.**

In urban projects, capitals can come from real estate developers, construction companies and increasingly financial institutions, financial markets and financial élites. The innovative financial instruments help filling the gap in which public finance used to function but not able to do so in new context. **The increasing dependence on financial instruments** also means that **the urban development projects are more sensible to the fluctuations in the financial market and the risks associated with the financial instruments.**

06 How to evaluate the adaptability of different financial tools at local levels? Are there any lessons that we could learn from overseas experiences such as Netherlands?

In the paper *Financialising urban redevelopment: transforming Shanghai's waterfront*, I examined the

innovative financial instruments in four waterfront redevelopment projects in Shanghai. **The four cases - the Lujiazui Financial District, the 2010 World Expo site development, Xuhui West Bund and Yangpu waterfront redevelopment - adapted the choice of financial instruments to fit own social-economic context and constraints of the time.** Several real estate funding mechanisms were explored, such as the solidarity mechanism (tax-related policy, special economic zone), the public-private partnership mechanism (public-private partnership or private finance initiative), and the loan and bond mechanisms (bonds, loans, trusts) across the four projects. For example, Lujiazui case suffered from the Asian Financial Crisis in the late 1990s. Besides state fund, various innovative financial instruments were explored in the Lujiazui case, such as issuing bonds to obtain extra capital, borrowing loans from domestic banks and international corporations, and public-private partnership. Various policies used in the special economic zones were explored in the Lujiazui case, like tax deduction or exemption policy or a one-stop approval procedure to reduce red tape, to attract investment from domestic companies or focused financial sectors.

For long, a strong public land development strategy has dominated Dutch urban development practices for land value capture, giving the fact that major Dutch municipalities like Amsterdam and Rotterdam own the land in the cities. The practice is gradually evolved to involve more private investor through public-private partnership to reduce the cost in land development. However, in current urban development practice, both public and private sector are reluctant to enter the joint venture. There is a need for alternative financial sources to fill in the gap of higher development cost and diminishing municipal budget. For example, a new research by my colleagues Heurkens et al (2020) described the use of revolving funds in financing urban redevelopment projects. **A revolving fund is filled with various sources of public funding (municipal funds, grants or loans). The public funds are used for public area investments, such as infrastructure, public space or sustainability ambitions. Private parties in the area pay area contribution to the fund. Parties can appeal to the revolving fund if their project fits in the Fund's stated socio-economic policy objectives and repay the fund after the implementation of the projects.** Furthermore, we have observed a number of new players in the urban redevelopment practice, like institutional investors (e.g., pension funds), energy, water health or tech companies or social enterprises.



What will be the implications on the education of future urban planning and real estate talents?

The nature of the urban and regional challenges we are facing is complex while planning practitioners are encountering a changing urban environment full of uncertainty in the workplace. We have seen great opportunities in the process of urbanization and urban growth, while at the same time, we also find cities developing into future-proof ones need to address various social-economic and environmental challenges to build sustainable, eco-resilient and circular urban areas and regions. **We need both specialists and generalists in academia and practice. Traditionally, specialists appear to be more highly valued.** For next generation designers and managers, we are in need of the capabilities of the generalist - **seeing beyond the silos of particular specialism, and with the courage and creativity to make connections and integrate knowledge across fields of expertise and uncertainty** (according to Campbell 2014).

To understand and deal with real urban development problems, urban planners, designers and managers need to **understand the interrelations among science, technology, society and design, be able to combine and synthesize a variety of academic and professional knowledge.** For educators, this means teaching students how to work in interdisciplinary settings, i.e. how to jointly discover the different disciplinary dimensions of an urban problem, and how to reflectively design courses of action. Students of today need to possess professional skills of tomorrow, among which cooperation and intercultural communication skills are essential.

It is important to develop analytical competencies, technical competencies and socio-political competencies. The training of these skills need to be addressed in the design of the education of future urban planning and real estate talents, by studying real-life situation, and integrating practice and practitioners in education program. One education course we provide to master students here in the Department of Management in the Built Environment in the Faculty of Architecture and the Built Environment in TU Delft is such a course. The Urban Redevelopment Game: Integrating Urban Planning, Design, and Property Development is an educational effort to combine the interdisciplinary, experiential learning, role-simulation and group work together (Chen et al 2019). Students are asked to draw up an urban development plan in a real urban setting by means of role simulation. They are grouped into different roles based on parties as they appear in reality: municipality, real estate developer, housing association, etc. Student who

play with different roles are assigned to a working group, coordinated by their own process manager (student), and guided by both role assistants (Lecturers with in-depth knowledge on specific knowledge domain) and group supervisors (lecturers with broad knowledge on urban development). **The final urban development plan goes**

beyond the traditional plan, requesting students not only provide a program and set of strategies for future urban development, but also take into account of the process of land expropriation, cost-benefit analysis, project phasing and possible collaboration model.

Reference

Adams, D. and Tiesdell, S. (2012). *Shaping Places: Urban Planning, Design and Development*. London: Routledge. Ch.14 (pp. 286-295)

Campbell, H. (2014). Specialists and generalists: Are there too many hedgehogs and not enough foxes? *Planning Theory & Practice*, 15(3), 287–290.

Chen, Y. (2020). Financialising urban redevelopment: Transforming Shanghai's waterfront, *Land use policy*, <https://doi.org/10.1016/j.landusepol.2020.105126>.

Chen, Y., Daamen, T., Heurkens, E.W.T.M., Verheul, W.J. (2019) Interdisciplinary Learning and Practice-Theory Integration: Experiences from Urban Development Management Education in The Netherlands, in *Journal of Technology and Design Education*, 30 (5), 919-936, DOI: 10.1007/s10798-019-09541-5

Heurkens, E., Hobma, F., Verheul, W.J. and Daamen, T. (2020) Essay Financiering van gebiedstransformatie: Strategieën voor het toepassen van verschillende financieringsvormen bij binnenstedelijke gebiedsontwikkeling, available from: <https://www.stedelijketransformatie.nl/publicaties/essay-financiering-van-gebiedstransformatie> [accessed 18 October, 2020].

Theurillat, T. (2017). The role of money in China's urban production: The local property industry in Qujing, a fourth-tier city. *Urban Geography*: 38(6): 834–860.

Website

The Binckhorst project: <https://www.denhaag.nl/nl/in-de-stad/wonen-en-bouwen/ontwikkelingen-in-de-stad/ontwikkelingen-binckhorst/innovatief-wonen-en-werken-in-de-binckhorst.htm>

<https://www.guggenheim-bilbao.eus/en/the-building>

<http://urbanwaterfront.blogspot.com/2011/01/barcelona-event-as-catalyst.html>

UES INTRODUCTION

Xi'an Jiaotong-Liverpool University (XJTLU) is an international joint venture university founded by Xi'an Jiaotong University in China and the University of Liverpool in the United Kingdom. As an independent Sino-foreign cooperative university, it captures the essence of both prestigious parent universities and is the first and only one of its kind approved by the Ministry of Education in China.

Urban and Environmental Studies University Research Center (UES) aims to become an internationally significant research centre investigating development and urbanization at the local level in China by focusing on environmental, economic, social, demographic and health changes. Integrating the interdisciplinary and international research capacity and scientific platform at XJTLU, and studying China's experience of urban development and changes, UES explores paradigms for more smart, sustainable and high-quality development. It works closely with the governments, enterprises, research institutes and international organisations, consolidating support for research and overarching scientific benefits to society.



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