



# TRANSFORMING OUR CITIES 2019

## SDG 11



**IsDB**   
البنك الإسلامي للتنمية  
Islamic Development Bank





## Our mission is finding sustainable solutions to the world's greatest challenges

The Islamic Development Bank (IsDB) is a multilateral development bank that has been working for over 40 years to improve the lives of the communities it serves by delivering impact at scale.

We bring together 57 member countries across four continents, touching the lives of 1 in 5 of the world's population. We are one of the world's largest multilateral development banks, with an annual volume of operations above \$10 billion and subscribed capital of \$70 billion.

The IsDB is headquartered in Jeddah, Saudi Arabia, with major hubs in Morocco, Malaysia, Kazakhstan and Senegal, and gateway offices in Egypt, Turkey, Indonesia, Bangladesh and Nigeria.

Our mission is to equip people to drive their own economic and social progress at scale, putting the infrastructure in place to enable them to fulfil their potential. We build collaborative partnerships between communities and nations, and work towards the UN Sustainable Development Goals by harnessing the power of science, technology and innovation, and by fostering ethical and sustainable solutions to the world's greatest development challenges.





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# Rapid urbanisation is one of the biggest challenges the world faces

Foreword by His Excellency, Dr Bandar Hajjar, President of the Islamic Development Bank

It is my great pleasure to introduce this journal on the Transformers Summit. On December 10th 2018, in the beautiful city of Cambridge, we held the first IsDB Transformers Summit, themed around the driving progress towards Sustainable Development Goal 11 through Science, Technology and Innovation.

The main purpose of this annual event is to connect entrepreneurs, innovators, and global leaders to discuss the role of STI in achieving the Sustainable Development Goals. Our first Summit looked closely at how to make cities and human settlement inclusive, safe, resilient, and sustainable.

We want to celebrate scientists and innovators who devote themselves to find solutions that contribute to the achievement of the SDGs, and to accelerate progress towards sustainable cities and communities. These are the innovators of the future and pioneers of transformation and change. They are the ones who turn challenges into promising opportunities and who contribute to improving the quality of their communities' lives.

Why did I put Science, Technology, and Innovation (STI) at the heart of my strategy for the IsDB and as one of the main pillars of my five year programme?

It's all part of a new chapter in the IsDB journey, started in October 2016 when I assumed my position as a new President of this great institution.

I looked at the map of our 57 countries spanning four continents, Africa, Asia, Europe, and Latin America. Our member countries stretch from Indonesia in the East to Suriname and Guyana in the West, and from Kazakhstan in the North to Mozambique in the South. In addition, we help Muslim communities from non-member countries, which includes a large part of the rest of the world.

We are involved in improving the quality of lives of 1.7 billion people around the world (1 out of 5 of the world population).

All our member countries are developing countries, about half of them are located in Africa, and 21 of the 57 member countries are classified as LDCs.

These countries are facing disproportionate and complex economic and social challenges such as: high poverty, social instability, fragility and food insecurity, poor education, poor portable water and sanitation systems, a shortage of clean energy, increasing sovereign debt, urbanization challenges, global warming and environmental disasters, gaps in development finance and unemployment.

To add to these challenges, our member countries' population will increase by 35% in the next 13 years, rising from 1.7 billion in 2015 to 2.2 billion by 2030, with the working youth population expected to increase by a 100 million.

By 2050, 68 % of the world's population will be urban with close to 90% of this increase taking place in Asia and Africa.

The conventional development model of the majority of our member countries shows their economies depend heavily on exporting raw material.

This model does not create added value. The revenue generated from these exports is publicly spent on development programs and projects to bridge the ever-increasing development funding gap, while member countries borrow from development banks and bilateral donors to finance their development programs. However, these countries have not been able to achieve their desired economic growth, nor create new jobs to accommodate the new comers to the job market annually.

The main question that arises in this context is: is the current development model adopted by these countries sustainable?

Is it able to solve the development challenges they face?

Does it have the ability and mechanism to achieve the SDGs?



The answer is a resounding no.

Why?

The conventional development model, which relies mainly on natural resources, and which makes the government sector the main engine of development and increase economic growth, has reached a deadlock.

It is no longer able to continue addressing economic and social challenges and achieving the necessary growth and development. This model has actually resulted in an increased indebtedness of the countries and higher unemployment levels of their people. For example, the export of raw materials does not create value added, and does not create jobs in importing countries at a time when unemployment is increasing in raw material exporting countries. On the contrary, it will export job opportunities with the exported goods, which results in deteriorating the terms of trade of raw material exporting countries.

In addition, the investment required to achieve SDGs is huge and beyond the capacity of any government. If the government chooses to depend on its public expenditure to finance development, it needs to increase its public spending eight-fold, which would lead to an increase in public debt.

This is, of course, not sustainable.

So, what is the appropriate model to break this deadlock practiced for more than 50 years? What is the proper model to achieve fair and sustainable development through an agenda that is people-centred, inclusive and forward-looking?

I believe that we have to change our mindset. We have to think out of the box if we really want to address these challenges efficiently and effectively. There is only a decade remaining to reach 2030 and supposedly achieving the SDGs by then. We do not have the luxury of a 'wait and see' mentality. We need to have a paradigm shift in development to keep our promise of achieving the SDGs and leaving no one behind. We need a development model that offers integrated solutions.

The proposed new development model, adopted by the IsDB, aims to provide focused, integrated and holistic solutions for member countries, focused on the root causes of development challenges rather than the symptoms.

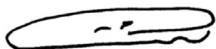
The main objective of the new model is to help member countries empower people to build their own future, particularly through Islamic Finance products science, technology and innovation (STI), global value chain, and partnerships.

In the new development model, we believe that STI will bring immense economic opportunities, including new and better jobs, and higher living standards. As such, the Bank is working on three specific areas, which include:

1. Supporting and empowering young innovators and entrepreneurs through mentoring, funding, and training, arming them with the necessary tools, resources, and contacts to develop their strategies and expand their businesses to empower them to build their future and help their communities.
2. Assisting member countries in developing strategies and policies that support the establishment of an STI ecosystem. In cooperation with UNESCO, IsDB has embarked an initiative of establishing an institutional STI policy framework, would be implemented soon in two member countries, Uzbekistan and Mozambique.
3. Integrating STI into the IsDB business model, allowing the Bank to prioritize its projects in areas where impact is the highest, bring development partners to work together, and participate in mobilizing financing for specific industries to create an enabling environment to transfer technology from advanced nations to these countries.

During a short period of time the IsDB has made a great progress in promoting and utilizing STI.

I hope you enjoy reading the rest of this journal, and to learning more about the summit. We remain incredibly proud of the work we have accomplished and look forward with great excitement to the future.



**- H.E Dr. Bandar Hajjar,**  
President of the Islamic Development Bank

**‘I have seen for myself the  
power that innovation can have  
to transform lives’**



**Dr. Hayat Sindi** Chief Advisor to the President, Science, Technology and Innovation

At the IsDB, we believe everyone has the right to live in dignity and aspire to prosperity, and that nurturing economic growth is the best route out of poverty.

We want to help equip people to drive their own economic and social progress at scale by putting the infrastructure in place to enable them to fulfil their potential.

Just because you are poor doesn't mean you don't have great ideas. We want to equip people to transform their visions in reality, to help themselves, their families and their communities.

For me that is about putting science at the heart of our work.

As we look to the future challenges of the modern world, we believe development needs to go beyond top-down grant-giving. To ensure long-term sustainable progress, we need to empower local partners and their communities through the transfer of technology and knowledge that has the power to transform millions of lives around the world.

Science, technology and innovation (STI) are continuously recognized as strategic drivers of economic growth. With the right tools and convenient environment, innovators and the business community can tap into the potential of STI to develop innovation solutions for the development issues facing their communities.

This why the IsDB launched 'Engage' in February 2018.

Engage is an online ecosystem that connects scientists, innovators, and entrepreneurs from all over the world. The platform is the first of its kind for the developing world, ultimately helping to improve the lives of millions of people.

The Engage Platform provides a space to interact and engage with a large network of all stakeholders from around the world such as NGOs, Government policy makers, researchers, scientists, private sector to showcase their imaginative ideas to address

sustainability challenges in our member countries, more specifically clean water and sanitation, affordable and clean energy, good health and well-being, quality.

Through Engage, innovators, SMEs, private sector companies and Governments will benefit from tailored mentoring services and expert know-how that will help them take their ideas and proposals to an internationally recognized standard.

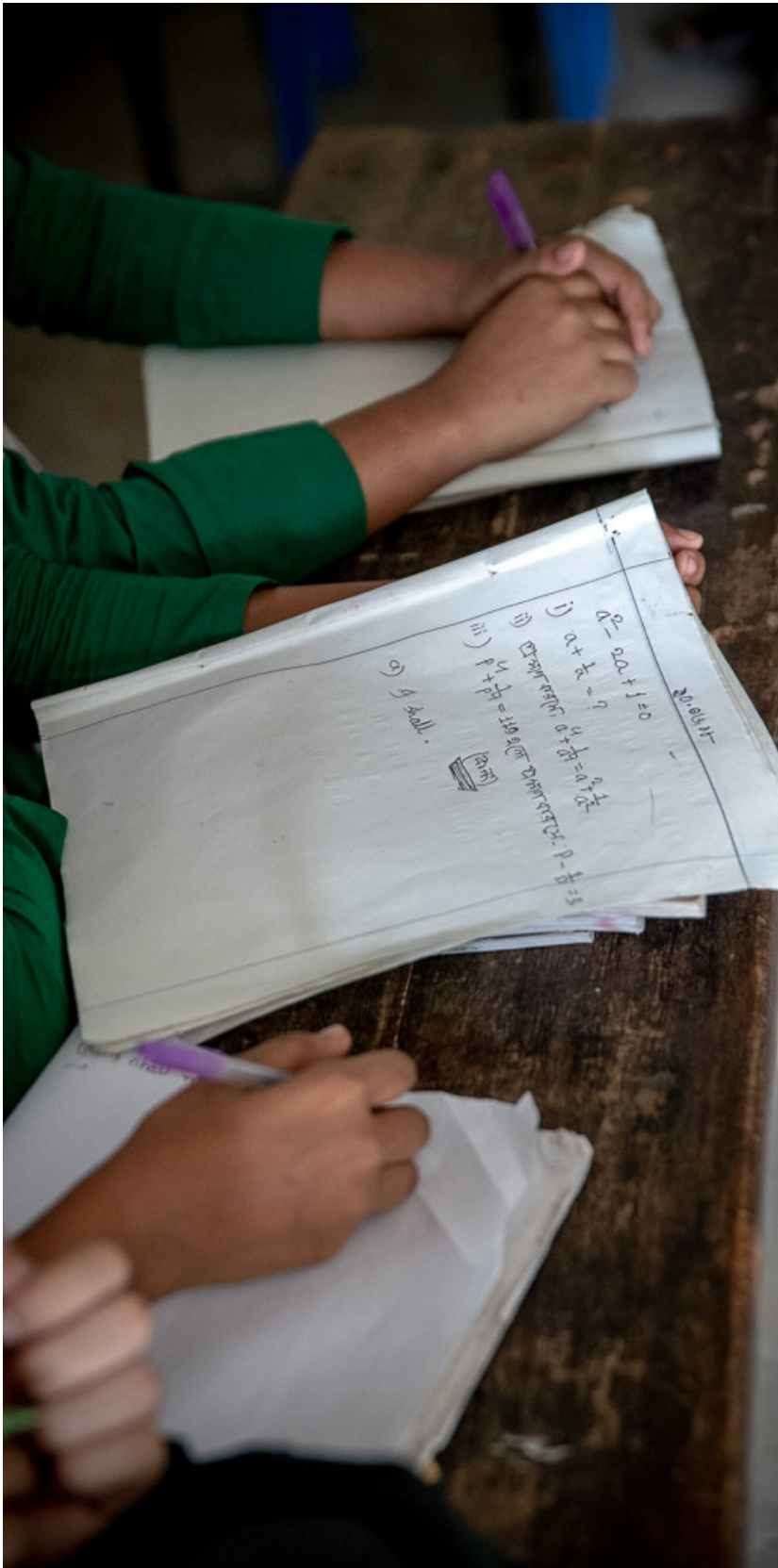
To further ensure that innovators, Startups and corporations have access to a steady flow of financing facilities, the IsDB has established the Transform Fund, a \$500 million fund to give people and organisations the resources they need to realise their goals and change the world.

The Fund provides seed money for innovators, start-ups and SMEs to develop their ideas and compose a strong business proposal. It will also provide funding for partnerships between researchers and entrepreneurs that will tackle humanitarian challenges in line with the UN Global Goals.

Through Transform, innovative ideas will be translated into real development solutions that will address development challenges and empower the communities and youth in particular to realize their full potential in line with the SDGs.

These ideas will result in technologies and solutions that will contribute to the development of IsDB member countries and Muslim communities in non-member countries. This fund will have a long-term impact on the member country's economies creating jobs and generating trade.

**'Nurturing economic growth is the best route out of poverty'**



Since the launch the Transform fund in April 2018, we have received over 4,300 applications for funding ahead of the Transformers Summit. We have travelled far and wide to ensure we are spreading the message to as many people as possible.

We made it possible for applicants to submit requests for funding under four core categories:

1. **Proof of concept** – To support scientists and innovators who have a proven concept and who are in need for initial funding to develop their ideas into a pilot project and a business proposal.
2. **Start up** – To support applicants who have successfully piloted a project which involves innovative technologies and are in need for additional funding to replicate or scale up the project
3. **Commercialisation** – To support candidates who have already implemented and successfully scaled up an innovative project and are in need of additional funding for the commercialization of the services and products developed for a project.
4. **Capacity Building** – To support Governments of member countries in developing their technical and functional science, technology and innovation capacity to address major development challenges.

In addition to the financing made available to entrepreneurs, the fund will also provide legal help, advice on business models and advice on protecting intellectual property. All applications for funding go through a rigorous approval process, which will involve screening and evaluation by the IsDB STI Department, as well as independent reviews from external consultants.

To ensure a fair and accurate approval process, we have established two high-level Boards to help review all applications. The IsDB Scientific Advisory Board, comprising a constellation of ten of the world's leading scientists provide critical advice and guidance for us in setting the Bank's STI direction, not least in helping review such important applications for funding.

We also have an esteemed Board of Trustees, who provide counsel and expertise to ensure the fund is able to achieve its ultimate goal of driving economic and social progress through science, technology and innovation. They also have the final decision on where funding is to be allocated.

We know that science and technology are critical enablers of every Sustainable Development Goal, which is why the IsDB focuses so much of our attention on innovative partnerships built around science and tech-led solutions.

In the week before the Summit, we held the first Islamic Development Bank's (IsDB) Transformers Academy.

Our Transformers Academy brought together innovators and researchers across science, innovation and technology in achieving SDG 11. With the global population continuing to rapidly expand, there is an urgent need to address this issue. Now is the time to include scientists and innovators - as well as policy makers - to drive forward progress. Good ideas come from everywhere – we need to listen to solutions from emerging markets

To combat poverty and drive development, it's vital to tap, and unleash, the potential of everyone. That's why we're committed to supporting Women and Girls across the world. We do this by targeting access to finance, education/ school enrolment and health programmes, including maternal health – areas that traditionally have proven to be barriers to greater female emancipation.

The development challenge ahead is an enormous one. With nearly 54% of the world's population living in cities, it is critical that the world's experts address new societal changes through innovative and technology driven solutions. We have been actively investing in STI-led projects to accelerate progress in cities worldwide.

I'm confident that our STI Roadmap, brought to life by the Engage platform and Transform Fund will drive meaningful change to millions of people by giving every scientist, technologist and innovator the opportunity to make a difference to the world around them.

Engage and the Transform Fund represent a new era of openness for the global Muslim community as we look to foster collaboration from all around the world and ensure that everyone has the right to live in dignity and with access to basic human needs.

I have loved science from an early age. Encouraged by my father, I travelled to the UK and US to pursue my studies. I have seen for myself the power that innovation can have to transform lives. ◦

- Dr. Hayat Sindi



# BY 2050 THE URBAN POPULATION

## Goal 11: Make cities inclusive, safe, resilient and sustainable

More than half of the world's population now live in urban areas. By 2050, that figure will have risen to 6.5 billion people – two-thirds of all humanity. Sustainable development cannot be achieved without significantly transforming the way we build and manage our urban spaces.

The rapid growth of cities in the developing world, coupled with increasing rural to urban migration, has led to a boom in mega-cities. In 1990, there were ten mega-cities with 10 million inhabitants or more. In 2014, there were 28 mega-cities, home to a total 453 million people.

Extreme poverty is often concentrated in urban spaces as local and national governments struggle to accommodate the rising population in these areas. The future of our cities relies on addressing population challenges, creating financial and environmental sustainability, providing green transport, as well as education, good health and wellbeing for all.



# WILL REACH 6.5 BILLION:

## 3.5 BILLION PEOPLE

Half of the world's population, 3.5 billion people, live in cities. By 2050, the urban population is expected to reach 6.5 billion

## 3%

Cities occupy just 3 percent of the Earth's land but account for 60 to 80 percent of energy consumption and 75 percent of carbon emissions.

## 828 MILLION

Currently 828 million people live in slums, and the number is rising

## 28

In 1990, there were 10 cities with 10 million inhabitants or more; by 2014, the number of "mega-cities" had reached 28

## 95%

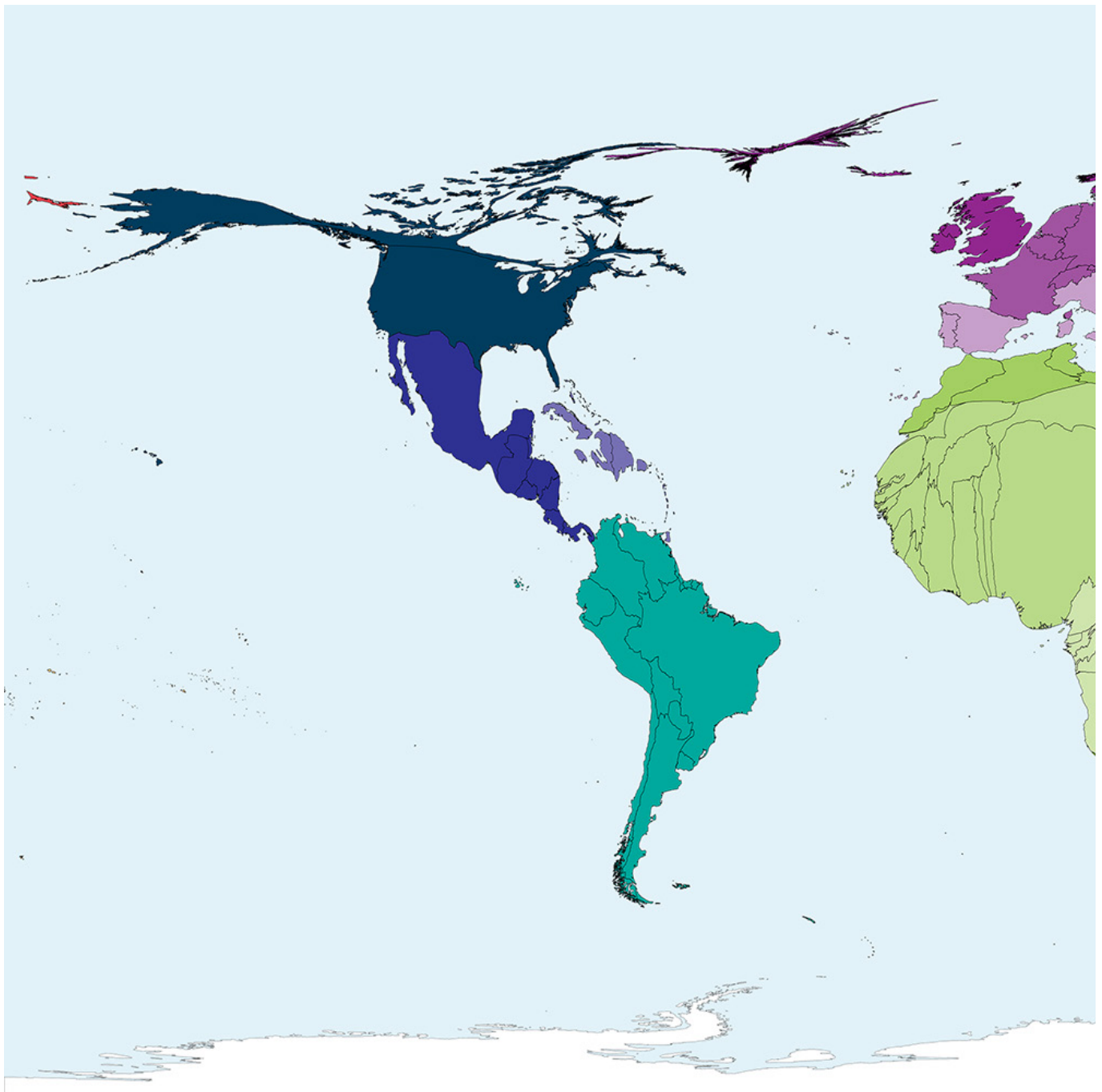
In the coming decades, 95 percent of urban expansion will take place in the developing world

## 1.2 Billion

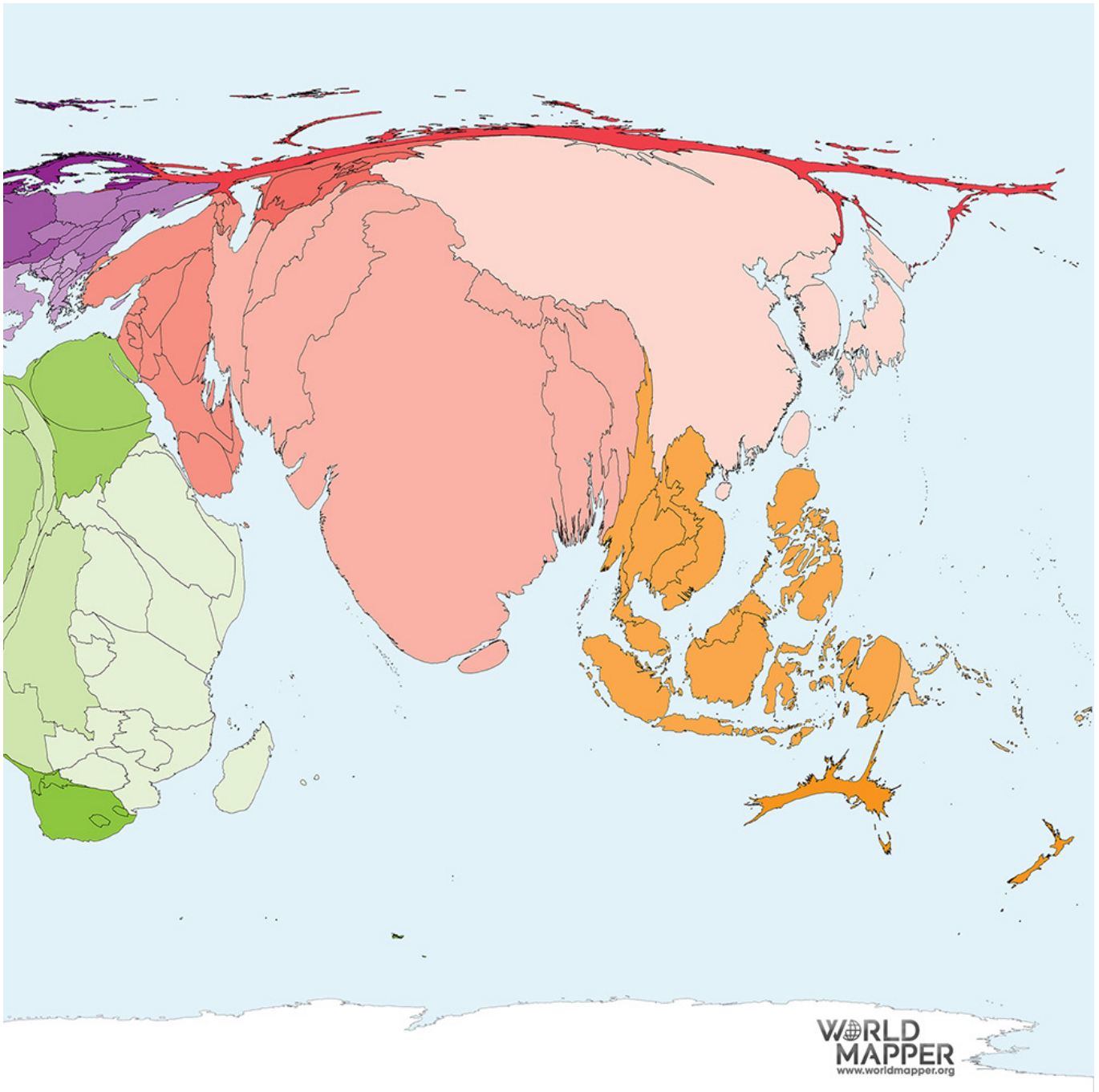
1.2 billion jobs depend on a healthy and stable environment

Cities are hubs for ideas, commerce, culture, science, productivity, social development and much more. At their best, they enable people to advance socially and economically.

With the number of people living within cities projected to rise to 5 billion people by 2030, it's important that efficient urban planning and management practices are in place to deal with the challenges brought by urbanization.



The world's territories ranked by the size of the population in 2050.



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## WHY WE MUST EMBRACE SDG 11

**By 2030**, ensure access for all to adequate, safe, and affordable housing and basic services and upgrade slums

**By 2030**, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

**By 2030**, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

Strengthen efforts to protect and safeguard the world's cultural and natural heritage

**By 2030**, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

**By 2030**, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

**By 2030**, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

**By 2020**, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015-2030, holistic disaster risk management at all levels

Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials





# Q&A

Rt Hon. Claire Perry and H.E Dr. Bandar Hajjar

## The Importance of the SDGs



*Why is SDG 11 so important for the IsDB and its 57 member countries?*

**HE:** Around 70% of the Bank's approvals are in infrastructure, including renewable energy, transportation, water and sanitation, schools, universities, hospitals etc. So what we are trying to do now is to try to shift our traditional way of implementing projects to the new way that focuses on science, technology and innovation, and on value chains. To give an example: just a few months ago we launched a programme called the 'Regional Rice Value Chain Programme' in 10 sub-Saharan countries, and we chose these countries and this programme because we believe we have to strengthen the economic competitiveness of our Member Countries.

This has been done by identifying the comparative advantage of each country in each sector, and then we try to design value chain and identify each player in it. Forty countries out of 57 grow rice, 35 million people are small farmers from rice sectors. The demand for rice increased by 6%, so we integrate STI with the value chain in order to increase the productivity of the sectors. The new approach is to provide a holistic-integrated solution. Finance by itself will not solve the problem. We have to provide a full package and finance is just one component. So, if you don't put it in a value chain approach, and if we don't integrate STI, in the process we will not be able to maximise the development impact. In Gabon, we identified two strategic value chains, one is magnesium and the other is wood. They have the highest

quality of their available resources. So, we identified the marginals in this value chain and now we want to call for innovation on how we can transform these raw materials in to many products so it can create jobs and increase the added value of the wood and magnesium. We are not here to talk just about STI in science, we are also talking about finance, we have to come up with the needs of the individuals, companies and government are increasing, because they want solutions. The populations of our MCs are increasing, they are moving to cities and this will lead to the increase for the demand of good and services. Here the answer is STI again. It's an integrated, focused, holistic approach.

*What is your role Claire? How can you help make this happen around the world?*

**CP:** Often, I get the question 'How much money will government put in?' and, of course, there is lots of tech that requires subsidies upfront, but I want to focus on the results. I think this holistic approach, this value chain approach is so important and it is something quite new in how we think about solving some of these problems. For me government does a couple of things: it sets ambition, politicians are looking to the future, and with the climate change act in the UK we are forced to do that, and with the Paris Agreement focused on the world up to 2030 and beyond, we have to set ambition on a nation and international level. To focus on one particular sector, the green energy sector, the energy use of new buildings has been halved. Then there is policy, and we have to make sure of the interplay between stick and carrots. The call for legislative change often comes without thinking about this value chain approach. We know the big fossil fuel companies are thinking very hard about carbon capture, and other technologies as well, and want to invest their own capital, so it seems to me that working together is the right thing to do.

But government also has a responsibility around communication. People don't go to government websites for news stories, but we can help to set the tone and be involved, and celebrate, challenge and invest in innovation. The UK Government published its Green Growth Strategy in 2017, and historically when you do this you would have the media lining up to say climate change is a hoax, but this time it didn't happen. Something has changed in the world's perception, where you don't have people sitting around debating the warming period in the Middle Ages, people accept that the scientific evidence is profound and that if we delay, people's lives are on the

line. I think the sense is that with more extreme weather events, with some of the appalling devastation from hurricanes, people realise that climate change is a very real event. And of course government shouldn't be scare mongering, but helping to communicate it calmly as well as its policy and ambition.

*The needs of the 57 Member Countries needs vary – how do you take this in to consideration?*

**HE:** There is no single smart city model that fits all. You cannot for example go to a country that has a village and build tall buildings – they don't need it. They may need solar energy instead. In general, STI and the digital economy is important to facilitate and make the quality of life better. But we cannot implement one level of smart cities everywhere – it changes from city to city, community to community, and country to country. We have to use a smart solution to make life easier, to make life healthier, and focus on, for example, the quality of education and healthcare, these are often the most important components when we talk about smart solutions. We have to be careful – because we often hear the words 'smart cities' and it really means big buildings, it means parking underground, and this is not what we mean. We have 57 Member Countries, of which 21 are the world's least developed countries – this is not what they need!

*What is the next step for the Bank?*

**HE:** We're creating a manual, that helps the bank and Member Countries determine the regulations and rules. In the future, we want to rebuild and design all cities to be smart cities. This guide will help us to implement the project professionally, and implement with our partners. o



PANEL DISCUSSION

# POPULATION GROWTH:

## How Cities Can Create Opportunities



## Successfully Growing Cities v Stressfully Growing Cities

**John McArthur**  
Senior Fellow, Brookings Institution

Between 2015 and 2030, there will be two types of cities - successfully growing cities, and the stressfully growing cities.

If we look at the fastest growing cities, there will be about 1.2 billion people who will live in them worldwide, and roughly half of those people will live in just five countries: China, India, Nigeria, Indonesia and the US. However, if you look at the countries growing the fastest, where the urban population will double in just the next 15 years, it's a very different picture, because those countries are Burundi, Uganda, Tanzania, Burkina Faso and Niger. These are the countries which are having the deepest challenges in the agricultural sector, and one of the big puzzles, which needs to be better appreciated is that, for the cities to succeed, the rural areas have to feed them, and the markets have to connect.

One of the things we've discovered is when the rural area is connected, through innovation and technology, productivity within the urban area increases, and it allows the city to grow better.

The problem is that the fastest growing cities in the world are those with the worst agricultural productivity growth. It's not China, it's sub-Saharan Africa. We need these cities to connect with the world. These are cities where the ideas for technology, innovation, and for exports, in particular, are born, and where we will see urban services of successful living be defined or not.

This is a double barrel challenge for the next 15 years. The challenge is to remove the stress and replace it with success. ○



## Better Data

**Clare Melamed**  
Global Partnership for Sustainable Development Data, supported by the UN Foundation.

Policy responses have to be built on a foundation of good data and good information, if we are to have any chance of solving these problems. We've always needed good data, but in the context of the climate changing very rapidly, farmers are no longer able to rely on previous generations of knowledge for understanding how to cope with those agriculture challenges.

With populations moving so rapidly, the need for data has never been greater. The focus on the SDGs, and the emphasis of not leaving anyone behind has thrown a bit of a spotlight on some of the gaps in data and some of the ways in which the information we need to address these problems is lacking.

Take, for example, one of the most well-known international urban settlements in Africa: the Kibera slum in Kenya. If you look at the estimates of its population, you get anything from 170 thousand people on the lower end, to somewhere approaching 2 million people at the higher end. Academic research seems to be congregating at the 1.5 million mark. But still to have this level of uncertainty, of not knowing how many people live there, not even how many are sick or uneducated, but simply the number of people is outrageous.

If we don't know this about one of the biggest cities in Kenya, what about smaller cities? What does it mean about some of the smaller towns where so many people are moving to? There is a huge amount that we don't know.

What is encouraging at the moment is that there is also a huge amount of progress. It has become easier to know

things that it has ever been before. We have 100 satellites that can give us almost daily information about buildings, where rivers are flowing, soil quality. So it's possible to know these details, but it means approaching data collection slightly differently.

It used to be always least glamorous part of the government – the statistical office in some dusty corner in the ministry of planning - looking at spreadsheets and occasionally every five years let loose with a survey on the population to find out whether things have changed.

Today, we need to think about data collection very differently, as something that has to involve the private sector. Huge amount of the global data is actually collated by companies. We need to find ways for companies and government working together to safely use that data, to understand and get the information that governments need to make the right decision for their populations.

People need to be more involved with data, the data that governments have is only the raw material for the story that the society tells about itself. The critical thing is that people see themselves in that story, whether they live in the slum in Kibera, or a tiny village in Mozambique which isn't even on the map. Everybody needs to see themselves in the data if we are going to solve this problem.

We can, if we chose to, and it's a big policy question that we are facing here. ○



## 60 Million Displaced Globally

**Sanj Srikanthan**

*Executive Director of International Rescue Committee UK*

Before we ask ourselves questions about resilience we need to be thinking about the size of the population and the scale of the problem we are trying to address: that scale is huge.

The challenge is clear, and the International Rescue Committee is focusing on 60 million people who are displaced globally. The majority of those, 58% are living in urban settings and that trend is only growing. It mirrors the shift of the global population to live and work in cities.

The challenge is that they are the most vulnerable and they can often disappear in the city setting. Cities are dealing with issues within their own areas. Issues of a growing youth population, unemployment, and natural disasters or repeated displacement, are overlaid with refugees and other displaced peoples.

An IRC report looked at 23 cities and the role of integration in these cities. Through looking at cities ranging from Bristol to LA, Hamburg to Cox's Bazaar, Kampala, we noticed there is a disproportionate burden being put on cities in developing countries. There is a lack of a truly integrated approach on the question of how we build resilience if that's where the problem is becoming concentrated.

There are a few things which the IRC would like to partner with other organisations on. Firstly, cities can't stand on their own: they are often ahead of national governments in thinking about integration, resilience building and viewing everyone as a resident, as opposed to defining them by their emigration status. But what they need, and this is true of 60% of the cities we surveyed, is financial

resources and meaningful partnerships with the private sector – both in terms of creating jobs, which is a form of building resilience, but also in terms of building the infrastructure against future shocks – whether it's natural disasters, or displacement.

The second thing that they need is a recognition by national governments that many see advantage in the flow of people into cities. Even though displacement is a global challenge, in cities in many parts of the world they see it as opportunity, therefore we need to support their thinking about what are the benefits of emigration into the cities.

The third thing is the importance of integrating communities and cities. Yes, the people who live there are all residents, but some are from elsewhere within that country, or have crossed borders. And unless you provide services equally and build the resilience of both communities, you create tensions which make integration impossible.

The challenges of economic integration may seem self-evident, and the evidence is there, but political and socio-economic integration requires people to understand that you are serving one community, and they all belong to one community. o



### Low-tech Innovation

Innovation is not always high-tech – low-tech works as well. You may have heard about MUAC measuring tapes, that can diagnose whether a child is severely or moderately malnourished. We have now taken it upon ourselves, at the IRC, to match shades of those colours to appropriate treatment so that illiterate community members can treat children without the need for a nurse or a doctor.

So low-tech also works, but I think the most important innovation in the urban space that we've seen is around cash leading to livelihoods. In settings where NGOs such as the IRC work, traditionally it has been non-food items – so packages of things we think people need. But, in fact, they know what they need most. And in urban centres there are good markets, there are systems where if we give cash, for example through cash cards, we liberate choice and allow people to decide what they need for their families.

In one controlled trial that we ran in Lebanon, it showed a \$2.30 contribution into the local economy for every \$1 that we put through our system. So it's benefiting both residents and refugees. We don't want to be doing cash distribution, effectively as a social service system within that country, for ever and ever. We want to think about livelihoods.

Take, for example, Germany, where there are huge gaps in childcare and nursing: 50% of refugees are able to work and are at the working age, but they can't be matched up with opportunities. It's these barriers that exist, whether it's cities or states, because many of them have a lack of information or connectivity, that prevents the employment of refugees.

This model is trying to facilitate and fast track employment for refugees, so there is a continuum from initial arrival to cash contributions, to innovative solutions to get them into a stable working place.

And the biggest challenge is not the technology or the uptake on innovation, it's institutional barriers. If a refugee is taking a job, is it taking a job away from me? That's not the right answer or question. If the refugee is contributing to the economy does it increase the income base of the city to then allow it to build up resources in a more effective ways? That's the right question.



There are still challenges around urban growth. We can't let the discourse on the national level that we have now seen in many countries keep tending towards right wing populism.

Cities are looking at far more productive, cost effective and smart solutions to integrating solutions. ◦

### WORLD POPULATION GROWTH THROUGH HISTORY

- 12,000 years ago, the global population was 2.5 million – the size of a small city.
- 2,000 years ago, the global population was 200 million – the size of current day Nigeria.
- After the Industrial Revolution, the global population was 800 million – the same number as people who live in slums today.
- In 1967, the global population reached 4 billion. It has nearly doubled since.
- In 2007, the world's urban population outnumbered the rural population for the first time.
- By 2050, 70% of the global population is predicted to live in cities.



PANEL DISCUSSION

# FINANCING CITIES



## “Just like Astana, Islamic finance has developed very fast”

Astana has a population three times larger than when it began to become a fully-fledged city just 20 years ago. Today, it's home to more than 1 million people.

It's a completely new city that has been built from scratch. A planned city, that has become one of the most modern in Central Asia.

The area has been historically and culturally associated with Islamic wealth and between the 8th and 20th Century, it was central to global advances in finance and technology.

Even today, the paper we use was first produced in Central Asia using bamboo. This background has given us a sense of pride in our ability to contribute to global development.

In the modern world, there is huge competition between cities globally, between both global cities and smart cities. Everyone understands that any city has to be smart.

Cities need to be focussed both on the Sustainable Development Goals, but also on using all the advantages of the 4th Industrial Revolution. Happily, our demographics are very positive and 50% of the city's population is less than 30 years old.

So, what were the key ingredients to success?

First, we had to think about investment into education, to human and social capital.

Last year, we hosted a global forum based on the topic of future energy, which meant bringing in best practices and understanding how we could use financing for the sustainable development of the city.

### The Challenges of Providing Long Term Finance

One of the difficulties in providing long-term financing for sustainable cities is that of providing finance to developing countries. The financial system is often not very well developed and can come with its own challenges. There's a lack of transparency, a lack of trust, and a lack of proper monitoring. All these are factors that can make the investors shy away.

So, the question is: how do we make these countries financeable or bankable?

That's where the multi-lateral development banks can play a major role with their rich knowledge of the sector, of project management and many other factors.

As well as knowledge, they provide help in developing an ecosystem that will attract finance for new projects. Second, they provide thorough risk mitigation and they're capable of putting together a financial package to see who is willing to buy that particular risk, which few others are able to do. The third advantage is that MDB's can help member countries develop a regulatory framework that is required to bring in investment from outside. They can help with the development of the local capital market and mobilise local savings. ◦

*Dr. Zamir Iqbal, Vice President, Finance and Chief Financial Officer, IsDB.*

## Finding Second Stage Funding

We set up DDCAP because we thought we had a proposition, which we could bring to market, which would change the way that we connected certain Treasury and capital market activities within the global Islamic finance community in an efficient and responsible way.

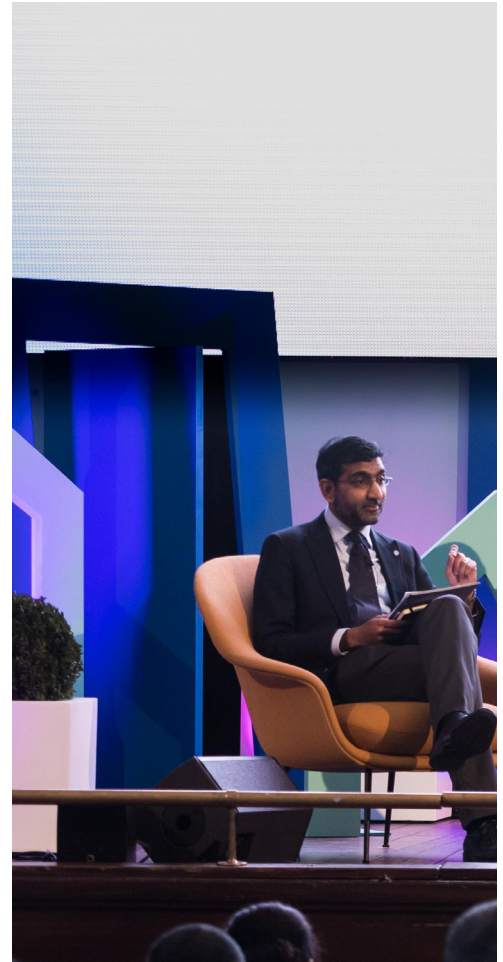
We literally had a concept on a piece of paper, so we had to articulate that concept, and go out and start to prove it. We had to resource it and take it through the concept phases and today, here we are, 20 years later. The Transformers will have the same sorts of considerations in their minds that we had all those years ago.

Innovators are required to have the ability to ascertain the likelihood of delivering against their social mission and against the financial requirements that certain investors may have once they start to fund the concept and take it to market. They also need to be supported, and I say this with the benefit of hindsight. You need to have a lucid explanation that you can provide to prospective partners, if you are going to take the innovation from proving concepts and tests to full activation.

Interestingly, I think most growing businesses in the Sharia compliance space, or that take venture capital or seed capital from Sharia compliance sources are going to have to grapple with changes as their company expands and as they require more traditional forms of financing. Early stage companies have no issues of debt, but if you are a firm that is building and working with Sharia compliances you are going to have to stay close to the tenants of the faith and to Islamic financing principals.

That can be quite challenging and from an investee's perspective there is still a concern over whether these businesses are able to scale up because those levels of financing are simply not available at the moment. That is something we're grappling with in our sector now because typically we are finding very interesting businesses to invest in, to grow and develop, but everyone is concerned with what to do in stage two and stage three funding. Yes, there are sources of funding we go through, and we're likely to have to defer back to commercial bank funding, whether it's from Sharia Compliance sector or whether it's from the conventional sector with funding made available in a Sharia compliant way, but I can't say the challenge isn't there. It's a challenge that needs to be focused on as the propositions grow and funding is required to scale. ◦

**Stella Cox CBE**, Managing Director of the DDCAP Group and Chair of the Islamic Finance Market Advisory Group





Islamic financing has developed very fast in the last 25 years and has meant that both Islamic and green finance are key pillars of the Astana International Finance Centre.

We have a traditional capital market asset-management focus, and at the same time, we're trying to create new and innovative financial industries in fintech and green finance.

Islamic finance is helping to drive this challenge. Last year, Malaysia issued the first green sukuk and we are already seeing a converging of Islamic finance, ethical finance and sustainable finance.

This is a good signal that all of these industries are based on key principles that exist in the Holy Quran.

It's a great opportunity for our part of the world, which is part of the former Soviet Union, and has a population of over 170 million, of whom around 90 million are Muslim.

The focus is very much on ethical financing, both for retail and corporate investment, but also on issuing Sukuk. The perception of these bonds has been changed and the fact that Sukuk is being issued by the governments of the UK, Hong Kong and Japan government shows that it's not only part of the traditional Islamic world, but now it belongs to the rest of the world too.

Astana hope to be a pioneer and the centre of a hub in Central Asia that intersects with bigger initiatives like the 'Belt and Road' plan, but also the Eurasian economic base. ◦

*Dr Kairat Kelimbetov, is the Governor of Astana International Financial Centre, a new initiative launched by Kazakhstan government to develop country's non-banking financial sector.*



# “I’m Driven To Do The Impossible”

Interview  
Dr David Moinina Sengh

**Dr Sengh:** I am the Chief of Innovation for the Government and the Advisor to the President of Sierra Leone for science, technology and innovation. It was a role that was created when the President wanted to drive his national development plan effectively and efficiently and support the innovation in entrepreneurial system in Sierra Leone.

*So, how much of that is created to deal with issues of development?*

**Dr Sengh:** A lot of the national development plan is around the development: it’s our five-year plan. We work across all industries, government and its agents. We sit in the office of the president to ensure that the work that we’re doing is not in silos and is linked up to the government’s mission to provide for its citizens. We can build informed solutions, build platforms, talk to people, ask questions and make recommendations to ultimately support citizens get what they deserve.

*In Freetown, there was mass migration from the rural areas during the time of the conflict that created a lot of additional social problems, how does this effect you?*

**Dr Sengeh:** The reality of Sierra Leone and Freetown are the realities of any rapidly growing nation that's trying to grow economically. With other mobility issues with energy, agriculture and poor value. The demographic issues are an opportunity really for young people, who are the majority of the population. Given that there are very few jobs, our remit is to think about solutions that can address that. How do we deliver that consistent support for young people in the formal and informal sector to become job creators? How do we support platforms that allow the Minister of Education to deliver content? How do we ensure that government services, social services reach people everywhere?

*How long have you lived outside of Sierra Leone yourself?*

**Dr Sengeh:** I left the country as a teenager to pursue education by myself. I went to the United World College and I did my undergraduate at Harvard, and my PHD at MIT. I worked for two years at IBM and went back home. I don't think it's a case that I was trained in Sierra Leone and left, which I don't necessarily have any judgement about. There are lots of stories where people get trained and they have to go out to look for opportunities. I think to learn and grow as we all should, and everybody should have an opportunity to see the world. The question is what we do whilst we're out in the world and how we return back home and what we do after we've seen the world.

*One of those things you worked on was prosthetics. Can you tell me a little bit about that?*

**Dr Sengeh:** Yes, my PHD was in multi-material 3D printing and the primary pursuit was state of the art was multi-material 3D printing, digital imagining, soft tissue modelling and combining multiple fields. I love being at the intersection of multiple fields and multiple research questions. It makes me so curious and there's nothing more perfect than prosthetics that connects the human being, medicine, health, technology, the human body and clinical.

*Did you foresee the need before the solution?*

**Dr Sengeh:** Yes, the need is universal. My professor, Hugh Herr, is a double amputee at MIT.

*Did he encourage you?*

**Dr Sengeh:** My joining that research led to the beginning of us doing work on prosthetics sockets.

*Obviously in Sierra Leone there is a need*

**Dr Sengeh:** There is a need at the time. I don't know what the numbers are now for amputees, but it would have reduced definitely.

But the work was globally relevant, and with the work my faculty, they are still working on it and continuing with different forms of it. Trying to optimise it.

*Innovation is everywhere, but how to do choose where to go?*

**Dr Sengeh:** You have to choose the question you're thinking when your response is – 'that's just terrible that's still true.' You then come up with a list of maybe five or ten things that you feel are just terrible. For me, access to health, people, education, quality in education, waste in planes. I think somebody just has to reinvent how we deal with materials in planes, and food waste, it's the same thing that's been there for since whenever.

*Do you mean in an aircraft?*

**Dr Sengeh:** For every meal that gets served, there needs to be an innovation.

*That's quite specific*

**Dr Sengeh:** Yes, it's a terrible one, but my point is you have to come up with specific things that make you think: 'Why is that the case?' And then go do it. I don't think there's any process. And I think my role now, and why I'm doing what I'm doing, is as important as those institutions and governments have. The question is; what policies do you need to put in place to ensure your citizens are waking up with, before you say: 'Enough is enough, I'm going to go solve that problem.' What are the resources that you're giving them to think maybe

I'll do that? That's what I'm doing and that's why I'm in government.

*Can you point to specific areas where you're working on now and where you feel you're making progress?*

**Dr Sengeh:** There is a lot. I'm using data to inform decision-making in cabinet, in policy. Globally, government data is everywhere. We don't have the right people in government with the data. That's why you need the other scientists in government in positions where they make decisions and to have the authority to say: 'I want A-B-C.' There are many governments around the world who do that and who allow that, and we are doing that in Sierra Leone and that's tremendously exciting. And, it's important that we keep doing that and actually informing how policy interventions based on data, and based on our data, not based on some data that an organisation collected, but because we have had the scientists who can ask those questions.

*Is data an issue in developing nations?*

**Dr Sengeh:** I think data is an issue everywhere, hence GDPR and it's a question, I don't think a question really is data is lack of data, I think this data is a question of what you can do with the data that you have. That's very difficult in terms of what research questions you want to ask.

*So, could you give me an example of what sort of data you have access to?*

**Dr Sengeh:** One example, the annual school survey that the government has done which is the survey looking at all schools that we have and just tracks all features of those schools, including number of teachers, number of latrines, number of students per class, they have a library, they have a solid classroom, they have 200 + features. What do people typically do with that data?

*What do they do?*

**Dr Moinina:** You can do some summary statistics – how many students are there, how many schools we have, how many teachers we have and then maybe you develop some policy around that and some intervention. But how do you know what infrastructure to invest in across the country? How do you know what the preferred number of students per school should be? How do you know that? How do you make that policy decision? You read random

controlled trials study that was done in South Sudan 20 years ago or do you read a study by Cambridge university professors in the community outside Cambridge?

*Sometimes data allows us to ask more questions, but not always allows us to make conclusions.*

**Dr Sengeh:** What we need to get towards actually where we're using the data to ask questions. It's should be used to hypotheses it should be used for asking questions and for us to go and say ok I'll tell you what we did with the school survey data. We build machine-learning models to predict learning outcomes and this is what my team does. A bunch of young Sierra Leoneans, computer scientists and state house of the president, writing machine-learning code to do this and then we suddenly know what the feature are that are important across all schools in the country, all grades that are predicted learning outcomes.

*Has that been done anywhere else?*

**Dr Sengeh:** I don't know, and I don't think so, but that is what we are doing. And we're doing it because it's what we need to do. You have technical people in positions of authority. And, now we can know the importance of bathrooms and functional latrines and learning outcomes. Using the data, we can know the importance of a library, or if you're not peeing in class where there is school it means you're going to be leaving school to go home or find somewhere else. Or if you're a girl on your period, are you not going to come to school because there are no facilities? It's all of those things. We didn't just decide on that subject, it was the data that showed it and then you can ask questions.

*Have those decisions been made?*

**Dr Moinina:** It's new and we just found this out and my team is still crunching the data as we speak, but decisions will be made.

*And this is a Sierra Leonean team?*

**Dr Sengeh:** It is a Sierra Leonean team that are young people who are crunching code, of whom 60% are women, so this is not some people in Stanford or MIT, this is my people. So, it's fun actually, just absolutely fun to work with them to develop this because they know the context, they understand the importance of this. The other part that's fun is you can develop new hypothesis

that people couldn't develop before, stuff that people couldn't do before so you're learning and pushing the science forward. So you're pushing global science forward and research and that's fun and fantastic. And you are informing policy, you have people who, you're telling the president this and he's listening, and he wants to engage so that's also quite fun.

*Just in your own story, how did you manage to go outside the country and were you recognised as being someone who was excelling? Did you just get, did you get lucky?*

**Dr Sengeh:** Definitely lucky. One does not prepare to do these things that I'm doing. My father was at UNICEF, my mother was a seamstress... Regular. I'm a regular...there's nothing extraordinary about my story. I knew and understood the context of Development at UNICEF and Global Development, I did know that.

I do truly believe in this thing about luck. It's not like luck that I don't deserve it, I think we're in a place because we're prepared for it but it's luck that we are in the space that we are in and that's completely fine.

*You rap as well?*

**Dr Sengeh:** Yes and I design clothes. What's exciting about Sierra Leone, is that the personnel is changing what the narrative looks like about who can be an advisor to the President, who can be senior Government official, who can be in as his advisor and be in on his bilaterals. And so, the young people in Sierra Leone, I say to them and at one of the companies who lost three people to me. Amazing guys, the best, top notch people. It's like look, I tell the young people if you want to be in a space where you're learning and growing and being the best globally, not just the best in Sierra Leone, come work with us.

*What drives you then?*

**Dr Sengeh:** Doing the impossible, doing things that are impossible. It's impossible to be in Government and dress like this. But it's also impossible to use data and data analytics and form policy, that's what everybody says. It's impossible to be young and having fun in Government, we had that conversation. It's impossible to use technology and innovation to impact lives quickly and at scale. It's impossible for a country like Sierra Leone to be a leader in innovation. It's impossible for young people to be

thriving in Sierra Leone and competing with the best of the best. It is impossible for us to do the things we're doing in 3-5 years. It's all impossible. ◦



PANEL DISCUSSION

# ENVIRONMENTAL SUSTAINABILITY IN CITIES

How are the public, private and academic sectors facing up to the challenge of meeting the environmental goals across the developing world?

*Three leading global voices discuss the way forward.*

## How businesses currently view challenges in the developing world

### An electric combination of opportunity and risk

There are companies now that are looking at the extraordinary growth of cities in the developing world and the rise in the middle classes and their aspirations.

This has been driven by a lot of different factors, but one of the key concerns for firms is the electric combination of risk and opportunity.

Companies are seeing enormous opportunity to provide food, services, infrastructure – and all those things that are actually part of fuelling that massive growth.

But, while they're taking a great deal of interest, they are also recognising now that there is considerable risk in getting it wrong.

There's obviously a risk that goes with every financial decision that doesn't return on the investment, but with the UN Sustainable Development Goals, big companies in particular know that they're being held accountable to a set of standards and principles which they certainly weren't 30 years ago.

This means we're seeing an enormous amount of interest from companies in how they can measure up to some rule of the SDGs.

At the Cambridge Institute for Sustainability Leadership, we do a lot of work to explore how both the private sector and financial institutions can be part of the solution, rather than be part of the problem

We've grown from five people to over 100, which is a reflection of the extraordinary growth of interest from the corporate sector in this sustainability agenda.

It's our 30th anniversary as an institute – so we've seen an extraordinary amount of evolution while working with the private sector over that time.

In today's world, we also see that there is a lot of aspiration for impact investing, but the real challenge for investors, whether they're investing in this country, or anywhere else, is knowing what the impact of that investing is having?

What are the outcomes that are being achieved? In the last three years we've been working with a group of asset owners and investors who are interestingly asking themselves the question 'How can we demonstrate long term social and environmental returns, as well as financial returns, from the investments that we're making?'

We have half a dozen metrics that we're using ranging from climate stability through to decent work, resource security and health and wellbeing.

It's really difficult, but it has to be done! We absolutely have to be able to demonstrate that those investments are delivering returns, however the investment is being made, whether it's a slum in Africa or a modern city like this one. ◦

*Dame Polly Courtice,  
Director of the University of Cambridge Institute  
for Sustainability Leadership at the University of  
Cambridge.*

## The work of the UNDP

The UNDP the development programme has a presence in 170 countries and it has a very strong and broad mandate because we work on all areas of sustainability – economic, social and environmental sustainability.

One of the major entry points, is that we work a lot on participation, and making people become part of the process.

We need to find solutions to the problems people perceive they have and work closely with governments of course but also a broad range of actors: civil society, academia and the private sector to see that we can nurture partnerships in order to implement the SDGs.

There a need to focus on growing cities, not least in Africa and Asia, where we will see 90% growth in the coming decades.

We plan for that and work quite closely with partners to take into account people's participation and understanding of how this can come about.

We also see that responsibility in regard to emissions, climate change and also health, and how that comes together to create good change management. In growing cities we need to look at that problem, when there is a lack of public transport and infrastructure and it's clear that a lot of investment is needed.

The problems people perceive on a daily basis are also very different from the kind of investments that we need on a long-term basis.

So, with regard to climate change, it's important to work with different stakeholders and to plan on how to deal with risk reduction, because many cities will see different weather patterns in the future, and this will affect the infrastructure and the kind of investments we make.

That's why, all the investments that we make today have to take into account how we mitigate climate risk and to adapt to changing weather patterns. ◦

*Ulrika Modéer, Director of the Bureau for External Relations and Advocacy, United Nations Development Programme.*

## Electrification for 1.5 billion

Our work is around building investable businesses that can contribute to the SDGs and I think energy access and access to sustainable mobility are the two area we work on as a foundation.

We've found ourselves, on the energy side, working on electrification for the one and a half billion people that don't have it.

That's become as much of an environmental programme as it has an energy access programme in that most of these solutions are renewable energy solutions and we are having to power up Africa and Asia in a way which is low carbon which in many ways is the future in 10-20 years' time.

We work with cities to help them build a sustainable mobility system and what we've spent 10 years working with large-scale, mass transit planning and thinking about how to move large quantities of people around cities in a sustainable way.

As of last month, there were 4 million people a day being transported in a more affordable way and lower carbon way than previously. But there's a growing mass of peripheral cities in Africa and Asia which are growing very fast, and unless those populations are also participating in city life by having access to affordable and clean transportation it's going to become very difficult for cities to cope.

So, we've started working with local private sector companies over how to extend services such as transportation services into the lower income settlements.

The big challenge today is what does the regulations between transport and cities look like. How do cities regulate the private sector in a way that really increases service delivery without making the problem worse because there are a lot of potentially negative impacts of improving transportation where you can get more vehicles on the roads?

So, we are doing a lot of work around how you can put more people on the road, without necessarily having more vehicles on the road. o

*Sam Parker, Director of the Shell Foundation.*



Forest Whitaker

# “We empower people to engineer peace and develop social businesses”

- Forest Whitaker Film Director and SDG Advocate

With more than half of the world’s population living in cities, it is critical that experts come together to share understanding of the challenges we all face and find the best ways of dealing with them.

This is exactly through that kind of initiative that we can hope to achieve the Sustainable Development Goals, the SDGs. As member of the UN Advocacy Group for the SDGs, I believe it is crucial that experts and decision makers convene to help improve the lives of everyone at the most local level. Goal 11 aims to make the villages, towns and cities where people live inclusive, safe, resilient and sustainable. It requires collaboration and a long-term vision. As is often the case, it’s the young leaders of tomorrow who will encourage the biggest change and foster the most dynamic partnerships. So I’m delighted to see this group of entrepreneurs, innovators and visionaries come together at event such as the Transformers Summit to tackle this issue together.

My organization - The Whitaker Peace and Development Initiative (WPDI)- is proud to support the inaugural summit, not least following our recent partnership with the IsDB on the Youth Peacemaker Network in Uganda.

This program seeks to help the likes of former child soldiers, orphans and other young people impacted by conflict and violence to become leaders and spark positive change. We empower them with life-skills, mediation skills and entrepreneurship skills so they can engineer peace and develop social businesses to strengthen their respective communities, and ultimately create a more peaceful future. ◦

Richard Curtis and I have a long history of working together –working to promote Richard’s films and TV shows, but also supporting Comic Relief and his efforts in developments. Richard’s body of work has kept Britain moved and amused with films like *Four Weddings and a Funeral* and *Love Actually* and *Notting Hill*, while his TV writing on *Black Adder* and *Mr Bean* have become part of the UK’s national language.

Most people who have raised a billion pounds, and contributed to the political climate in the way that ‘Make Poverty History’ has done, in aid, trade and debt reduction, might have thought that was enough. But 5 years ago Richard challenged the UN to make more of the Sustainable Development Goals (SDGs) than they had of the Millennium Development Goals (MDGs). The UN replied, “well you can do it then”. So he was tasked with that.

- Matthew Freud

#### Matthew Freud: Why were the SDGs so important to you?

**Richard Curtis:** There are key sentences that define your life, and I remember Bob Geldof, who did Band Aid and Live Aid in the UK, once said to me that he made more money in a 30-minute conversation with President Mitterrand than he did in the history of Band Aid and Live Aid. I realised that politics is where the money is and if we’re going to put the passion into fundraising, I should put effort into political campaigning. I launched the ‘Make Poverty History’ campaign to try and double aid under the MDGs and then when I saw the SDGs come I thought that I wanted to set them up for the next generation to campaign on. The reason I’m here today is because I’m so interested now in the enormous contribution of finance and business and investment to achieving these goals. Bob said to me, “it’s the politicians who’ve got the money” and now I realise it’s actually the banks and the investment community who have the money, so you have to go after them too. It’s about developing an understanding of how we can fight together for justice.

My first focus was on extreme poverty. But then I became focused on the first generation to end extreme poverty, the last generation to be threatened by climate change, the most determined generation to end injustice and inequality. The SDGs have expanded my vision of how you can change the world.

**MF:** As the notional father of the communications around the Global Goals, do you want people to embrace the holistic nature or lean into the ones you can most engage with?

**RC:** I think what’s great about the Goals is that it’s both. On the one hand, I’ve been so interested hearing about sustainable cities and it’s amazing to witness events such as the Transformers Summit, where people are passionate and argumentative about the issue. One of the things I feel strongly about is that we have to unite around a plan: people of good purpose should not see people of good purpose as competitors. We have to work together. One of the things about the Goals is that they unite all our best intentions. I had an interesting



## THE SDG's HAVE EXPANDED MY VISION OF HOW YOU CAN CHANGE THE WORLD

Screenwriter, producer and director **Richard Curtis**  
interviewed by freuds' Chairman **Matthew Freud**

**INTERVIEW** RICHARD CURTIS - INTERVIEWED BY MATTHEW FREUDS

meeting with some influencers in 2015 and I said to them, “here are the goals” and they went “yeah nice, thank you”. Then I said, “which is your favourite?” – and that’s when they got interested. One said, “obviously it’s gender” and then someone else said about not getting gender equality without education for all, and then someone else said, “well, you can’t get educated if we’ll all be on fire and the world is going to hell”. So fight for the one you can and look into partnerships that push on all 17.

**MF:** What do you think is needed to achieve the Goals? How can people tap into the awareness of the Goals to get their objectives away?

RC: It’s a 2-way thing. Whenever you’re trying to fundraise you come at it from 2 angles. First, saying a problem is a crisis and it needs money, but also at the same time you have to say the things you’re doing to help are really making a difference. And you have to be chipping away at the crisis. That’s why I’m excited about the Transformers and, in 2020 I hope they will sit in the room as famous examples of things that have made a difference. A little bit of investments has led to things that change hundreds of thousands of lives and hopefully becomes commercially successful. So you change the paradigm from corporate social responsibility to something that’s integrated into business and into our lives. In our own lives it goes from giving £5 to Greenpeace, to actually doing things in our lives to benefit the environment.

What I love about the Goals is that they should be able to integrate all those positive things. You’ll get some governments – like governments like Rwanda and Ethiopia are already doing – lining up laws and decisions pegged against the Goals to say “are we making sure everything we do has a positive effect?”

**MF:** There was a 19th century model of corporate philanthropy that saw great fortunes made without much thought made about purpose. A modern business needs to look to integrate these Goals as values. It seems to me that for the Goals to endure, they can’t be a hobby and have to be at the core of what we do.

RC: I agree and that’s why we want to make them more famous. When I first came across the Transformers logo, in Davos, the thing I loved about it was that it had 5 of the goals in it and that drew me in at that moment. That’s what the Goals do – bring us closer together. What you say is let’s work together right away to push ours and the others.

**MF:** I think Dr Bandar’s model for development is probably different to the development culture of the last 50 years of aid, but it is a more integrated approach with PPP and investments in the Transform Fund. The Transform programme is a more viable way of achieving these Goals.

RC: Forgive me for being general as I am not an expert on sustainable cities but one of the things I think we’re all going to do is try and have a big campaign in 2020 about the Goals, for which the IsDB will be a prime example of people doing the right things. I think one of the things we’re trying to think of is something to do with personal finances. I think it would be really exciting to say to people, where is your pension money going? Actually I want it to go into impact investment. If people had ideas of a way people could express a way confidently where their money was going I think that could help change the world.

**MF:** I think it goes even further than that. There was a number going around at Davos last year that a trillion dollars a year is transferring generationally from people who haven’t cared where their money is going to a generation with at least a passing interest. It’s not just about impact investing, it’s about the impact of your investments. All of us have responsibility of how our money is used.



Larry Fink from Blackrock challenged us to at least know what businesses were doing with money so investors could see how positive their investment was.

RC: If we have a slogan in Project Everyone, it is that 'if you want to make things happen to have to make things, not just talk. You have to really do some things. And that's what I'd say to the Transformers– you're doing the right thing. It's a lot better than having 50 conversations with your friends about how unjust the world is and complaining about the government or worrying. To make things happen, make something of your own to make a real difference. And I see that in the younger generation who are doing really interesting, exciting things.

As an aside, I went to an event in Cheltenham recently where my daughter was doing a talk about a medical crisis she had when she was 14 which changed her life. She was on stage with a young girl who had experienced FGM when she was younger, and a girl who had been born with no womb and another girl who had been a boy. And all 4 of them had started organisations to fight for people with the same conditions and same experience. Not just sitting back and saying 'why doesn't the state take care of me', but fighting for the state to take care of everyone. That's what is so admirable about the clever scientists and innovators who are choosing to use their talents to help other people. And it is brilliant to praise and give money to people for it.

MF: You used to be a comedy writer who did activism on the side, it now seems to be your main role. Project Everyone became Global Goals, and then became Goalkeepers. What about in 2020?

RC: So Project Everyone was a b2b organisation to convince the UN. The BBC did an hour-long launch programme about it. We were talking to organisations to make more of the Goals. Goalkeepers is a big event in New York and South Africa, taking political campaigners, and giving them support. Then in 2020 we need to take all these people, including people in this room, and we have to think of a big noisy slogan for it.

I do think one of the things about the SDGs which is important is that they are there to address today's crises as well. One of the things that tends to happen with the SDGs is that people say, well we've got a migration crisis, or political, or climate. So let's deal with them and get around to the big dream. But implicit in the SDGs are the answers to these things, these states, have to be done simultaneously.

MF: What sort of advice would you have for some of the Transformers who have travelled for miles to share with us things they are doing? As a community, how can we best help the Transformers?

RC: We can fund them. I think the very process of selection has made their ideas more attractive. And as I come from a sales and marketing background, I would always say make sure you have your pitch and story. Make sure the trailer is good and you have a tale to tell – the positive things, the progress, make sure the message is clear. We need every communication example. People always say there isn't good news and the bad is always more interesting but you hear a story like a 16 year old with a great story like Rainenergy, you think that I'll tell that story to someone. I support the innovation and the science and, like companies like Apple have proved, it's good to market it well as well.

But what I'd say is that as a person in the UK welcoming you all is that what is great about the SDGs is that everyone has to work on solving their issues and I am profoundly aware of the injustice and poverty that we have to solve here ourselves. The first thing Obama said is that I have to fix it in the States as well as everywhere else. And it's amazing that the bank represents 57 countries because we'll solve it as a world or we won't solve it at all. ○





PANEL DISCUSSION

# EDUCATION IN CITIES



## How do we use technology in education to achieve the SDGs?

When people think about technology you think laptops. But I think that books were once a technology that were used for education. You mention education outcomes, I also think there is a difference between education, and learning outcomes.

What I think is primarily important for us, is that we are creating the right platforms such that students can learn. We are not going to be able to get all our youth to behave, learn and sit in rows like this, take exams and train for a job that is not going to be there in 10 years. If we realise that, then what our true quest is; what are the learning outcomes and skillsets we need for young people to thrive. Not to take jobs, but to create jobs themselves.

If that is true, then some of the things we are doing in my directorate is thinking about how we transition scientists, to data scientists. How do we better gather and use data as a learning instrument to solve problems?

Education in cities – we have plenty of tools based in our cities that can be part of the curriculum. How do we allow teachers, mentors and instructors ultimately look at the world as a place for learning and use materials there to solve real problems. If we don't use the system, then we are probably missing the point.

For me, the question is science. I think the conversation 'oh you should do something with science and technology, or arts and creativity' is false. The idea of having a hypothesis, research question, a methodology, whether you are painting a picture, making a sculpture it's still true. In terms of your imagination, the person needs to be able to solve it. When I was growing up, the idea in Sierra Leone was you were an academic or a scientist. These are false comparisons we have in society in general between arts and science - I think we shouldn't make young people choose, but we should do everything. We all want to solve problems and make money, but it just happens that if we follow a scientific, rigorous process we achieve that.

In terms of gender equality, change has to come from within institutions. Within my directorate we have stipulated that 50% of the directorate have to be women - you have to be intentional about it or it is never going to happen. My data scientist, I actively selected to ensure women were being represented, and now young girls think the job is cool and see those role models working in data science and in the office of the President. But you have to move institutionally.

In Sierra Leone there are only about 10,000 schools, so we use the exams results to predict the features that are best able to predict learning outcomes. You may not be surprised but one of the outcomes is better classrooms, not makeshift classrooms. The second problems is latrines – who do you think uses latrines the most and does not go to school if the latrine is not functional...women, girls! That's where research comes in. We have to use the data to ask questions we could not ask before and build a structure around it. I took my Minister to actively build latrines, and asked them to watch the impact after 5 years. ◦

**David Sengeh**

Chief Innovation Officer, Freetown, Sierra Leone



Education is critical. But, what type of education is really needed for smart city? That is a big question, because it relates to the problems that societies in cities face. In the developing world the problems are quite severe – they lack security, water, energy, health, and so the type of education that can produce innovators to address these problems is the right approach.

Luckily, we have new technologies that are advancing rapidly that hold the promise of solving these problems. It could be IT, AI, gene editing that have a lot of promise and are good signs. We are actually finding these taking route in developing world. They no longer depend on knowledge transfer from the North but are being led by China, India, Brazil and Africa in advancing these technologies, and this is real promise that will provide smart cities.

In Africa, we have another problem, the climate of smart cities. Climate change is a real problem for Africa, and we need to address technologies to make societies more resilient, and more aware. This is likely to spread to the north.

If we adopt a methodology that can improve the rational thinking, the creativity of children through specialised programmes instead of going through raw education, inquiry-based education and hands on education we can experiment to enhance education. You can produce thinkers and creators of knowledge as well as problem solvers.

But that is of course part of the equation. The other half you have to get students to know more about social problems. If you enter a University and do science, it is unlikely you will know about social problems or the SDGs. That has to change. A student in a University has to be fully aware of social problems from right across the faculty. This integrated education should also happen in the arts – especially in the first and second years of education if we are to produce real scholars.

In terms of gender equality in education, there is a gender scissors phenomena. At the beginning, when students enter the university, there are more girls entering their boys. By the time they graduate, they are around 50/50, by further education after University they drop sharply.

We need to look at how we can boost the role of developing countries in global science. In the year 1996, developing countries contributed 15% of peer reviewed journals. By 2016 the result was 44%. Why? Because China, India, Brazil, South Africa, Saudi Arabia, Iran and others expanded rapidly – that is positive. But, the negative is that these contributions are localised in a few regions. The poorest countries, with a population of over a billion, contributed to 0.4% of scientific knowledge across the globe. So the issue is, how can we use south south cooperation to train people coming from poorer countries. I think that is one of the strongest opportunities we provide, is for poorer students to study in these countries. ◦

**Mohamed  
H A Hassan**  
President-elect  
of The World  
Academy  
of Sciences  
(TWAS)

I think we need to ask ourselves what are we trying to achieve with education? Because I think technology is one of the tools in the tool box when it comes to education. Sometimes with technology we try and rush things like EdTech. What UNICEF have tried to do is partner with a number of organisations including the IsDB, UNDP and others to launch generation unlimited. This is a partnership which is aiming to catalyse action and investment around young people. A programme in Argentina is looking at how you tackle the challenge of rural children from being out of school, and how they can link to urban centres and technology to do that. So, it's bringing the resources of cities to rural communities through lessons that have been planned by teachers in hubs, but they train community facilitators and teachers from the area and give each student a tablet to access Realtime. The key there is looking at how you bring educators and technology in a way that is empowering both students and teachers together and showing some real promise.

How do you support young people to try and solve the problems around them? Another programme we work with – youth social innovation – doesn't start again with science and technology, but the problems you are trying to solve. Typically, within that it comes down to a new technology, at which point you start to think about it in those terms and play with it and use it rather than a starting point which is interesting.

How do you support young people from disadvantaged communities come up with solutions? One example is a group of girls in Kosovo who were seeing a challenge of their peers dropping out of school, because they were getting pregnant and they discovered that was about a lack of understanding about reproductive health. They designed an app providing factual information, which has now been scaled up across the country. This is a great example of young, local people identifying a problem and seeking advice and help to scale it.

In education systems more broadly we should talk about the measurements piece. It's easier to measure results around numeracy and literary and much harder to measure creativity and problem solving. So, from that systems perspective what value we place on measurement is crucial to bringing about change. ◦

**Katherine Crisp**  
Innovation Specialist, UNICEF

Education is very important for the developing countries I represent. In these eight countries we have a problem.

I think the challenge for the developing world, in Muslim countries especially, is joining together our communities. At the D8 we look at progress, human capital, policy making, and we are being very serious and focus for developing education. In Iran, we are meeting currently to establish a new university for STI, but again we have to look at how best we can create a platform and opportunities for our students coming from the developing world.

We are creating affordable fees so students have the opportunity to study STI. This is important to me. We are following the philosophy that there are no incurable diseases, only the lack of will. There is no lack of herbs, only a lack of knowledge. There are challenges, but for D8 we are starting a network for research and innovation focusing on STI. We're also forming the creative Islamic zone, where we will engage the Islamic way of financing – zakar, sukuk etc.

You have to engage children in science from a young age. At three years old you can absorb a lot of information already and you are creative already. The government has to come forward, but some developing Governments will not do that. What we are doing right now, is establishing a special centre in Malaysia to identify these young people. We're also working with the private sector. We look forward to all these young minds coming together to benefit all mankind. ◦

**Ambassador (Retd.)**  
**Dato' Ku Jaafar Ku Shaari**  
 Secretary-General of the Developing Eight  
 Organization for Economic Cooperation





PANEL DISCUSSION

# SUSTAINABLE TRANSPORT IN CITIES

# We're Seeing Real Growth In Electric Buses in China

Ninety per cent of people are living in cities that breach the World Health Organisation limits on pollution, but that doesn't tell the whole story...

In all, 54% of people living in cities have emissions or air quality three-times worse and 28%, have air quality that is five-times worse or more.

Meanwhile 20% of greenhouse gas emissions in cities are from transport. So, what we need to do is reduce CO2 emissions, improve air quality and improve quality of life.

Already many of the world's cities have signed up to the Green and Healthy Streets Declaration, which says that in 2025, all buses in the city will be zero-carbon, and from 2030, large areas of the city will be car-free or combustion-free.

Across the world cities today are doing things today that are particularly exciting, like the real growth in electric buses, In Shenzhen, all of the 16,400 buses are electric, and many cities are now following in its path – with the total cost of operation lower than that of diesel.

There's also a large new number of cycling and walking measures being implemented. There has been a lot of negative criticism of dockless bike schemes but, interestingly in the last two years, the proportion of people cycling in China has increased from 5.5% to 11.6%, so clearly, it's had an effect. Not only does it mean that cars are off the streets, but also that there's lower congestion, better air quality and that people are getting exercise.

Transport and infrastructure go hand in hand, so if we start with areas where the population is growing at an amazing rate, how do we provide housing for people? ◦

**Kevin Austin Deputy Executive**  
*Director, C40 Group of Mayors*

One of the areas where I'm involved is the American University where we're working on designing 3D printed buildings.

The big potential advantage is that in due course you could build a home or office in hours or days. This could be one way of replacing the world's slums with reasonable housing.

There is still a lot of development work to be done, as we don't know what the construction material will be. People tend to think about concrete but I'm more interested in urea or sand that which are the natural products which are available in the local community.

We need to use what's local to where the change will take place. From a construction point of view that's exciting for me and from a transport point of view I'm interested at a variety of levels; whether its scooters – electric scooters or tuk-tuks – which are currently very dangerous things, both physically and with the emissions they provide, but could have a big future in due course. ◦

**Charles Cotton**

*Founder and Chairman, Cambridge Phenomenon*



The primary initiative that we've been working on in Kuala Lumpur is connectivity.

In particular, we've been focusing on how to transport people into the city, in comfort and in a reasonable time.

Ideally, commuter should have a comfortable journey time that takes between 30 minutes to an hour.

So, transportation is about how we flow the traffic in and out the city.

If you're going to be walking or sitting in your car for hours in your commute, it's not an effective use of time. How do we improve that? In Kuala Lumpur, we're trying to integrate public transport so people can commute to and from their offices in a certain time.

That means the travel from home to the station, or taking public transport from the station to the office. We're trying to improve the first mile and the last mile. That means offering connectivity, so people can walk or take the bus comfortably at either end.

Some interesting findings have also showed us that some changes will be more difficult to ask the public to make.

In Kuala Lumpur, we recently completed a small study that found people who are driving a car will regularly use Light Rapid Transport rather than ride on the bus.

If we provide a bus, it's probably the people who ride motorcycles or people who walk who will transfer to it. But, unfortunately for the car drivers, it's unlikely will make the same switch.

Across the past ten years we've seen people change their mode of transport from cars to light rail transport, but the ridership on the buses doesn't increase at the same rate.

That's why we need more campaigns to move people onto public transport. Across Kuala Lumpur we're also acting to remove the number of car parks in the city to make them move to public transport.

Where also looking at the funding model, which is 80% private and 20% public, but we're trying to reverse that and push for 30% public and 70% private. o

**Datuk Sr. Mohd Najib Mohd**

*Deputy Mayor and Executive Director, Kuala Lumpur*

## IT'S REMARKABLE TO SEE WHAT HAS BEEN ACHIEVED IN ONE YEAR BY THE IsDB



His Royal Highness **Sanusi Lamido Sanusi**, 14th Emir of Kano

## Leadership

All the nations in the world that fix their problems fix them through efficient leadership. Leadership is not just about talking, it is putting words into action.

As the Emir of Kano, I'm looking after an area of Nigeria that has the second largest city in the country, and it's growing.

Many people look at cities and they immediately focus on the top-level numbers and people. They see GDP, they see men like Aliko Dangote (the richest man in Africa), who is from Kano, or the Emir of Kano, because of my role as the former Governor of the Central Bank of Nigeria.

And this gives an impression of Kano as a very rich and wealthy place, but the truth is different, this does not give the full picture.

77% of the people are living in poverty. 58% of all children under five are suffering from chronic malnutrition. You've got one of the highest youth unemployment rates, there are drug problems, and religious extremism.

The only way you can deal with that is to think how to bring life to those cities in a sustainable manner.

For us the key issue is power: without electricity, you don't have industrialisation, without industry you don't have jobs, without jobs you don't have the income that you need.

We need to get to the heart of the problems of poverty, of the sustainability of cities and of the people, and this is why the work of the Transformers is so important, because they are looking directly at these things. And time is not on our side.

Kano and Northern Nigeria is growing at a rate of 3.8% in terms of population, which means you basically have a population of more than Nigeria and Niger, and many of those countries in the South, doubling every twenty years. The population of Nigeria as a whole is about four or five times more than what it was at independence, and most of that growth has come from the North. It's a combination of the age of when girls marry, the level of education of the girls receive, when college and university is not seen as common cultural practice, and a lack of focus on parental responsibility. You've got social policy issues, eco-development issues, health and sustainability issues.

All of these are critical to anyone who's involved in policy areas, which is why events such as the Transformers Summit are important arenas to discuss respective approaches, and disseminate ideas.

It is remarkable to see what has been achieved in just one year by the IsDB through a focus on Science, Technology and Innovation. That is leadership. We need to do is all take what we can from Summits such as this, and go back and implement it in our own way. ○



PANEL DISCUSSION

# HEALTH IN CITIES

# Sharing scientific advancement is a human right

On the 70th Anniversary of the UN Declaration of Human Rights, three world leading scientists discussed the future of healthcare, and how it will interact with technology at the Transformers Summit.

Article 27 of the UN's Universal Declaration of Human Right states that "everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits". Sharing scientific advancements and benefits is a fundamental human right.

Rapid urbanisation is going to put enormous stress on humanity's ability to provide adequate and necessary healthcare to populations. What are the most significant issues facing our healthcare services? How do we anticipate and prepare for these issues? Where do the solutions come from?

These are the questions posed to modern and future healthcare providers.

## Prevention

When we look at cities in other parts of the world, in Asia and Africa, the density of population is increasing, and with that comes the problem of healthcare. And so we are faced with people moving to cities because of the lack of facilities in the rural areas; we have displaced people in a humanitarian crisis who are being pushed into cities or areas where there's already a high density of population. And with that you're going to have so many diseases, many infectious diseases.

New preventive measures are needed and, in the short term, crucial to this is vaccines. It is so important to have vaccines, but that in itself is not enough: we need to develop alternative treatments as well. Take, for example, bacteria carrying mosquitos, which can be bred in such a way that the mosquitos will not spread the dengue fever. These are the alternative we need to think about.

We're waiting for the day when vaccines are take-over, because antibiotics are not sufficient – and the day when they become obsolete isn't very far away if we carry on the path we currently tread.

It takes an rounded effort to control diseases, and behaviour important in this. Look at what happened in the DRC: Ebola was devastating, but the country recovered. Very soon the next epidemic arrived but the reaction was immeasurably better, the mortality rate was much lower, and this was because of the behaviour changes. People knew what to do, how to protect themselves together with better preventative drugs.

There is no easy solution. But it begins with a major change in attitude. ◦

**Dr Firadusi Qadri**

Director, Centre for Vaccine Sciences (CVS), International Centre for Diarrhoeal Disease and Research, Bangladesh (icddr,b)

## Prediction

You can predict with a lot of certainty the kinds of diseases that growing populations in big cities are going to face. Most of them are going to be of the chronic, non-communicable type. That is type 2 diabetes, heart disease and stroke, chronic lung diseases etc. And those have well-known risk factors:

- The first one is nutrition, either malnutrition or overnutrition: obesity is becoming an epidemic problem. Even in African countries which you presume are relatively poor, 30% of city dwellers are obese or overweight; some of them more than that.
- Second is physical activity, or lack of physical activity, and this is where town-planning and policy-making around is crucial to provide space for people to be able to exercise. And a lot of cities are failing to do that, so they're disinvesting from the future and discounting the future because they're going to pay for medical care in the future, instead investing into those facilities now.
- Third is smoking. Smoking will kill one billion people in the 21st century. One billion people will die as a result of complications of smoking. Add to that pollution, which is currently killing 7 million people a year (and that's probably an underestimate). Smoking and pollution together are two of the worst things that should not be tolerated in future societies, and attitudes must change now.
- Finally, probably not as recognised, is the abuse of alcohol. There are societies where people drink a lot and there are societies where people don't drink a lot. In the ones that over drink, the population can clearly be seen to be dramatically dying off due to complications caused by over consumption of alcohol.

So I think you can predict. Infectious diseases won't go away, and new ones will keep appearing, but in terms of the number of people dying every year, throughout the world now, with the exception of 1 or 2 countries in Africa, most people are dying from chronic diseases, not infectious diseases.

Legislation is going to be a key component of fighting these issues. One of the best examples of how effective legislation can be was in Britain, followed by Ireland and other countries, when they banned smoking in public places, such as bars. Within a year you could notice a dramatic drop in heart attacks. It's been progressing positively ever since. The public have changed their behaviour, they have tolerated it. But they wouldn't have without legislation.

One condition to do with legislation, to do with vaccinations, is that you need herd unity. Take, for example, measles: measles is one of the most infectious diseases ever and it's a great killer. It had almost completely disappeared, but then you started getting people who are anti-vaccination and they threaten the rest of society. Here is the role for legislators: to say 'we will require you to be vaccinated whether you want it or not'. If you don't do that you will get measles coming back which could devastate societies. ◦

**Dr Abdallah S. Daar**

Professor of Public Health Sciences and of Surgery, University of Toronto

## Data

There's a lot of technology and a lot of capability out in the world that can be used to improve people's healthcare, but it's a matter of successfully applying it. That is where a lot of attention needs to be at – applying the many solutions that we already have and getting them out to the people that need them the most.

Disruptive technology is what is going to help most with tackling the problems we know.

In Liberia there have been a number of serious disease outbreaks in the past. Liberia is a country where 30% of the population live greater than 5km from the nearest hospital – an hour's walk away. Now this a different healthcare model than what many are familiar with in their country – where you have a doctor in town that you can get to fairly easily. But this is not applicable in Liberia. Therefore, you have to bring healthcare to the population.

The goal of SDG 3 is to 'ensure healthy lives and promote well-being for all at all ages' by 2030. The only way to bring healthcare to these people is through things like community healthcare and big use of community health work. The use of big technology can help professionalise the discipline and give community health workers the sort of tools and capabilities they need to serve this population.

There's a micro perspective, from a public health point of view, that this is often about surveillance and understanding the healthcare needs of a population through knowing how much healthcare is being utilised by your population. If the doctors are always fully booked then it's something you need to know about.

At the micro level, the stuff I'm excited about is optimising health delivery. One project that we supported while I was at the World Bank is an organisation called Demarji, who are a provider of data systems in ethical healthcare settings. They work with an NGO in South Africa called Mothers to Mothers. The problem they're trying to solve is that when you're treating HIV AIDS, particularly amongst mothers, to prevent transmission to their child, you want to make sure that they regularly come to their appointments so that they get continuity in treatment. Otherwise the treatment isn't going to work. But often the mothers will not show up. By observing recorded attendance, you can get historical data on these patients, and put it into a machine learning model and start to predict who are the highest risk patients of defaulting. And you can then target some effort into them not defaulting. So they run this programme and they can predict with a pretty good level of certainty who is most likely to default. And then they actively call them saying "hey your appointment is coming up."

Little things making sure that these existing systems are working. And these macro systems ensuring that they're resourced correctly. Two ways in which data can help. ◦

**Tariq Khokhar**

Managing Director and Senior Data Scientist, Rockefeller Foundation

## CROWDFUNDING

**The IsDB is proud to recognise the importance of STI in accelerating development, and how vital it is to support innovation in all its forms.**

The Bank's \$500 million Transform Fund will go a long way in supporting the most forward-thinking science, technology and innovation projects tackling the world's biggest problems.

But this is just the beginning. There are so many more people and ideas out there that deserve all of our support. For every one of our Transformers, there are thousands more people with ideas that can have a huge impact.

Our vision is to empower every single person to build their own sustainable future. We can do that at scale by working together.

We know about partnerships at a macro, international level. But now we would like to introduce an initiative that encourages it at a micro, grassroots level.

As part of our mission to be a forward looking and innovative organisation, we were delighted to announce the launch of IsDB Innovate at the Transformers Summit.

IsDB Innovate is a new crowdfunding platform created by the Islamic Development Bank that will allow us to reach even more ground-breaking projects – including those that perhaps didn't make the top round of funding from the Transform Fund this time.

Sadly, the Transform Fund cannot directly fund every single project, but we must not let good ideas go wasted.

IsDB Innovate will allow us to bring even more people's ideas and innovations to life and contribute to creating lasting sustainable development at scale.

The site includes projects from all our regional hubs and can be used in all their local languages.

Please remember that crowdfunding relies on word-of-mouth marketing to be successful. Please share the platform and the projects on it with your friends, family members, and anyone else who you may think would be interested. This really does have the potential to help change lives.



## Moving Forward



I would like to extend my congratulations to Dr Bandar Hajjar for his outstanding work as the head of the IsDB and for this great initiative to bring together entrepreneurs, inventors and leaders from such diverse backgrounds to discuss the role of science, innovation and technology in order to achieve Goal 11 of Sustainable Development Goals – the goal that aims to make cities and human settlements inclusive, safe, resilient and sustainable.

The challenges are huge, complicated and varied; they affect the environment, transportation, demographics, housing and basic social services.

According to estimates provided by the United Nations, currently there are 3.5 billion people living in cities, and this number will grow to 5 billion citizens by 2030.

If nothing is done about this rapid urbanisation, cities will become a phenomenon of spaces with increased population density. Increased concentration of people in cities will lead to a population explosion, youth unemployment, social exclusion, pollution and insecurity.

All these questions challenge us as public authorities, local authorities and grassroots communities.

In convening the Transformers Summit, the IsDB reminds all of us of the need to act together urgently to meet these challenges if we are to meet SDG 11 at the end of the evaluation period.

In doing so, President Hajjar joins forces to achieve the development task that has always been at the heart of his work at the centre of the IsDB.

I am pleased that the IsDB is putting science, technology and innovation at the centre of its long-term strategy; and that this commitment is accompanied by the Transform Fund of \$500 million to provide starting capital for start-ups and SMEs to facilitate the commercialisation of technology among the Bank's member countries.

Dakar welcomed the launch of the Transform Fund in February 2018. I warmly congratulate the young recipients of the Fund from Bangladesh, Kazakhstan, Egypt, Uganda and Jordan, for the innovative solutions they have proposed to accelerate the implementation of the Sustainable Development Goals.

I must also express my great appreciation to Dr. Hajjar for the invaluable contribution he continues to make to the outstanding cooperative relations between the IsDB and Senegal.

More than just a development partner, the IsDB has been an ally of Senegal for more than 40 years. This is due to the funding of over a hundred projects in various fields such as agriculture, education, entrepreneurship, energy, transport, hydraulics, sanitation and infrastructures.

The major Train Express Regional (TER) project, which was finalised in Senegal in January 2019, is a symbolic example of our alliance with the IsDB, which contributed significantly to its financing. By providing mass modern transport for up to 115,000 passengers a day, the TER will greatly help to solve the problem of urban traffic in Dakar and its suburbs, to decongest the city and, finally, to mitigate transport-related pollution.

Senegal is therefore fully aware of the initiative which brings you here.

And it is in the same spirit that we will have the great pleasure of hosting the next Transformers Summit in 2019.

In the meantime, I send you all my encouragement and best wishes for your success.

**Macky Sall**  
*President of the Republic of Senegal*

## Conclusion



With the global population continuing to rapidly expand in our cities, the IsDB believes that STI is a key driver in addressing the growing demand for housing, energy, clean water, food, transportation, infrastructure, and societal services. To be successful in meeting the SDG requirements, cities need to invest in innovative technologies and enable the convergence of the digital and physical worlds to make their cities safer, smarter, and more sustainable. We should take note of example cities, such as Singapore, Seoul and Helsinki.

The IsDB's new development model, which is transforming the Bank into a future-facing institution, is ready to embrace any recommendations and initiatives this Summit has put forward to build and enhance sustainable, healthy and thriving cities and communities.

I wish to extend my sincere thanks to Dr. Hayat Sindi, my Chief Advisor for STI, who has made great achievements in a short period of time beyond what was planned for the STI Department. We were able to enjoy the Transformers Summit as a result of her great efforts leading a talented and dedicated team who have planned, prepared, and organised this important Summit. I thank them all for their tremendous job.

I would also like also to thank the IsDB Scientific Advisory Board, the IsDB Transform Fund Board of Trustees, and the Committee members who helped select the winners of this year's Transformers contests.

Thank you, distinguished guests and panellists, for accepting our invitation and sparing your valuable time to discuss the role of STI in achieving SDG 11. I thank you all for participating, and wish you the most fruitful and productive future. ◦

**H.E Dr Bandar Hajjar** *President, Islamic Development Bank*



البنك الإسلامي للتنمية  
Islamic Development Bank



**TRANSFORM**



**ENGAGE**



**THE GLOBAL GOALS**  
For Sustainable Development

