

Asia's newest megacity offers model for urban growth as populations swell worldwide

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Iskandar Malaysia, the first "smart metropolis" of Southeast Asia founded on principles of social integration as well as low carbon emissions thanks to a green economy and green technologies, is a potential template for urban development in emerging countries with burgeoning populations, international experts say.

Malaysia's ambition for the massive new Iskandar development: a model of sustainable development and an economic hub in league with Hong Kong and neighboring Singapore.

And Iskandar is already a powerful magnet for foreign investment, exemplified by openings of expansive new facilities of the UK-based Pinewood Film Studios, Asia's first Legoland theme park, and remote campuses of several western universities (including the UK's Newcastle University, Southampton University and Marlborough College, co-located in Iskandar's 140-hectare "edu-city").

Ongoing creation of the new metropolis is the focus of special meetings of Malaysia's [Global Science](#) and Innovation Advisory Council (GSIAC)—a unique assembly of all-star national and international experts created to inform and assist the nation's sustainable development. GSIAC is chaired by its founder, Prime Minister Dato' Seri Najib Tun Razak.

Iskandar has been planned since its 2006 inception as an environment-friendly, socially-responsible metropolis, demonstrating innovations

many international experts consider essential for meeting the growing challenge of 21st century urbanization.

Separated by the Strait of Johor from Singapore and three times the area of that city state, Iskandar covers 2,217 square km of land on the southern tip of the [Malay Peninsula](#)—comparable in size to the African island nation of Mauritius or Luxembourg in Europe.

Iskandar's population of 1.3 million people in 2010 is expected to reach 3 million by 2025.

"We envisage in Iskandar Malaysia a mixture of skyscrapers, high rises as well as low-carbon, self-contained cities, townships, villages and neighbourhoods," says Datuk Ismail Ibrahim, Chief Executive Iskandar Regional Development Authority.

By 2025, he adds, the anticipated GDP of Iskandar will be US \$93.3 billion, a 465% increase from 2005, and a per capita GDP of \$31,100, a 210% increase.

Datuk Seri Zakri Abdul Hamid, Joint Chairman of Malaysian Industry-Government Group for High Technology (MIGHT) and science advisor to the Prime Minister, says Malaysia is determined to become a high-income country in an environmentally-responsible way through the creation of "smart" urban areas and villages.

Says Ellis Rubinstein, President and CEO of the New York Academy of Sciences (NYAS): "Malaysia's Iskandar 'smart metropolis' seeks to offer a model to countries needing to accommodate the social and economic needs of fast-rising populations and environmental challenges."

Together, Dr. Zakri and Mr. Rubinstein head the GSIAC secretariat.

"Seldom has any country ever had the opportunity to create a complete urban metropolis of this size virtually from scratch," adds Dr. Zakri.

"This massive Malaysian project is benefitting from the best proven ideas in sustainable development shared by renowned world experts via the country's unique Global Science and Innovation Advisory Council."

MIGHT President Mohd Yusoff Sulaiman notes that over 600 initiatives are being pursued under more than 20 blueprints so far (bit.ly/TCxCmf) covering every aspect of Iskandar's development, including environmental planning, energy efficiency, land use, housing, community safety, social infrastructure, education, tourism, business development, communications, road design, public transportation, maintenance, and solid waste, stormwater and shoreline management. The Low Carbon Society blueprint is scheduled for launch at the 18th Conference of Parties to the UN Convention on Climate Change next month in Qatar.

MODEL FOR AN URBAN WORLD

The United Nations estimates that the human population will grow from 7 billion to 9 billion by 2050, of which more than 6 billion will live in urban environments, almost double today's number. The increase necessitates building the equivalent of a city of 1 million every week until 2050, experts calculate.

The environmental stress caused by this intense urban growth is immense. Over 70% of CO₂ emissions today relate to city needs. Anticipated urban CO₂ emissions by 2030: 36.5 billion metric tonnes, assuming business as usual. This represents more than double the urban emissions of 1990.

Planners have placed livability and sustainability at the heart of the Iskandar development, with a goal of achieving low carbon society

status—emitting greenhouse gases no greater in volume than levels that can be absorbed by nature.

The Iskandar region is the focus of a major research project, "The Development of Low Carbon Scenarios for Asian Regions," that will contribute to the goal of reducing by 50% the intensity of regional greenhouse gas emissions per unit of production by 2025 (base year 2005).

The project will create an Asian showcase of best low carbon practices, involving closely intertwined socio-economic, environmental, energy system, waste management, land use, transportation, and consensus-building factors.

With the benefit of insights provided by international experts, Iskandar planners have designed a low carbon metropolis based on:

- Reduced use of petroleum and coal in favour of natural gas, biomass, solar power, and an increase in energy efficiency
- Construction of low-carbon buildings that require low energy and natural resources and produce zero or low greenhouse gasses
- A "smart" transportation system for public and private vehicles, as well as transit oriented development, including mixed-use residential or commercial areas designed to maximize access to public transport, which often incorporate features to encourage transit ridership
- Social and economic inclusion

SMART METROPOLIS ATTRACTING SMART MONEY

Establishment of the first "smart metropolis" of Southeast Asia is attracting "smart money" from investors around the world. From 2006

up to June 2012, Iskandar has drawn \$31.2 billion in committed investments, 38% of that from foreign sources. More than 10% of the new investment was committed in the first six months of 2012.

In September 2012, the first Legoland theme park of Asia opened in Iskandar in a 31-hectare park with 40 rides and attractions. It is expected to attract more than 1.5 million annual visitors. A water park will open in 2013 and a themed hotel within the grounds will open in 2014.

Meanwhile, UK-based Pinewood Studios is marketing Iskandar as a destination for film-making, in particular for Indian movies. The 20-hectare Pinewood Studios complex opening in early 2013 in the heart of Iskandar will be the largest independent integrated studio facility in Southeast Asia, offering state-of-the-art film stages, TV studios and post-production suites.

Pinewood will have two television studios, both 1,115 sq meters in area, with seating capacities of 600 and 800 people, respectively. In addition, there will be five film stages covering a total of 9,300 sq meter: two 1,850 sq meter stages, two 1,400 sq meter stages and a 2,800 sq meter stage.

Internationally renowned educational institutions establishing Iskandar campuses include UK's Newcastle University, the University of Southampton and Marlborough College, and Singapore's Raffles University, with several additions planned.

Says Prime Minister Najib: "At a GSAIC meeting in New York in June 2011, we agreed to showcase Iskandar Malaysia as a smart city template—protecting the environment, promoting equitable development and addressing urban development challenges."

"The collaboration of MIGHT, IRDA and the GSAIC in the creation of

smart, livable urban communities will yield an improved quality of life for thousands of citizens, with safer, cleaner, healthier, more affordable and more vibrant neighborhoods, serviced by more efficient and accessible transportation systems—great destinations for businesses."

"The smart community projects connect with an inclusive socioeconomic approach to growth based on the New Economic Model and Vision 2020 agenda."

In addition to the "smart metropolis" of Iskandar, Malaysia is creating "smart villages" and "eco-towns" consisting of affordable homes, high-tech educational, training and recreational facilities, and a creative, closed-loop agricultural system providing villagers with food and supplementary income.

Provided by New York Academy of Sciences

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