



Skills and capacity building is urgent

Architects, engineers, planners and other built environment professionals have a key role to play in transforming and decarbonising cities, but there are not enough professionals to match the level of urban growth in the developing world.

The 2020 Survey of the Built Environment Professions in the Commonwealth notes that managing the growth of cities in the Commonwealth sustainably is vital not only for the citizens of the Commonwealth but for the entire world.

The findings of this survey draw attention to the capacity gap which continues to grow. It notes that rates of urbanisation are rising, and levels of atmospheric CO₂ are at record highs, requiring urgent action to avoid catastrophic climate change. The survey sets out the challenges facing the education of built environment professionals.

Countries with the highest rates of urbanisation are reported to have the lowest number of professionals to meet the challenges of urban population growth (see graph overleaf). It also shows that developed countries are better able to meet urban challenges as they have greater numbers of professionals.

It is worth noting that there are no quick fixes to reducing this capacity gap. It takes some 10 years to train a competent built environment professional with appropriate qualifications and experience. This is all we have to achieve high carbon reductions.

It is clear that a new approach to developing key built environment skills is required both to design new, or retrofit existing buildings while creating liveable urban spaces, infrastructure and facilities as well as respecting the earth and its resources and ecosystems.

This series of city related policy and information briefs draws on lessons learned from cities and infrastructure work carried out by Triple Line over the past five years. It is intended to contribute to more sustainable, inclusive and climate-resilient cities that generate equitable economic growth opportunities for all by identifying market-driven solutions to urbanisation challenges and strengthening democracy and decentralisation processes through capacity building of government agencies at national, regional and city levels.

For practitioners, the approach to building and infrastructure design was developed around the mid-20th century. At that time resources, energy in particular, were assumed to be unlimited. It was also during this time that most curricula were developed. Many ex-colonies inherited the codes of their colonial masters. The approach to design and construction at that time is no longer valid and needs to be rewritten to take account of urgent environmental imperatives.

New online learning, deep mentoring and learning by doing approaches are required, together with new curricula that focus on the specific challenges we face and are rooted in an understanding of complex adaptive systems.

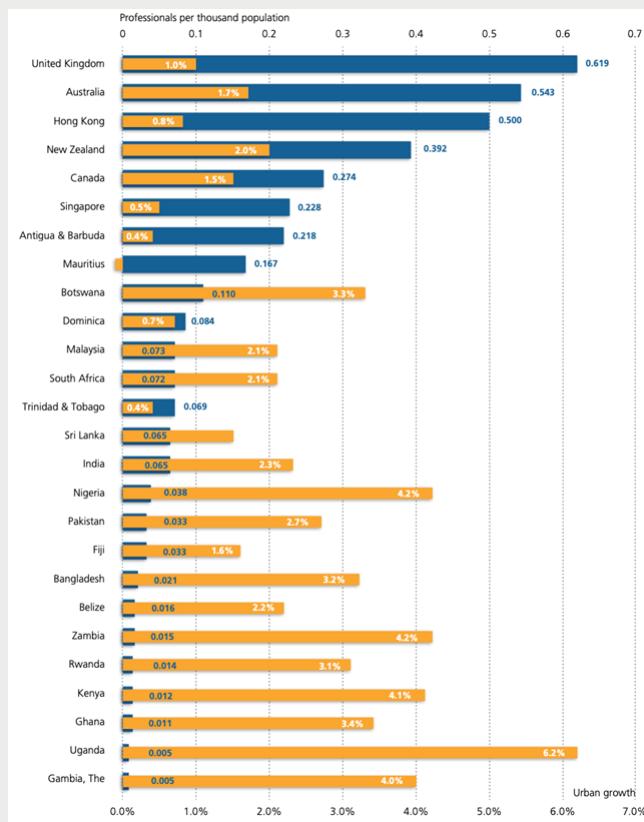
Built environment challenges in developing countries

The Commonwealth report identifies the following built environment challenges:

- Climate change
- Resilience to disaster and the need for adaptation
- Rapid urbanisation
- Urban sprawl
- Affordable housing
- Traffic congestion
- Lack of public transport
- Outdated planning policies and building codes
- Lack of enforcement of existing regulations
- Lack of local building materials
- Skills shortages
- Economic uncertainty
- Corruption and uncontrolled development

Number of architects per thousand population compared with rates of urbanisation

Source: 2020 Survey of Built Environment professionals in the Commonwealth



The survey also sets out the biggest challenges facing the education of built environment professionals. These include:

- Insufficient universities and appropriate places of learning
- Poorly skilled and unqualified teaching staff
- Outdated curricula
- Inadequate teaching material and lack of facilities
- Low standards compared with best practice
- Lack of practical training opportunities for students
- Low levels of funding combined with high fees/low pay
- Lack of diversity in terms of gender and ethnicity

What should cities do?

- Engage with the built environmental professional associations to align city needs with professional curricula
- Explore creative ways of speeding up professional development
- Encourage a programme to mentor students and recently graduated professionals
- Create demonstration projects that involve learning by doing as a mode of gaining competence and skill
- Create exemplars of best practice for professionals from other cities and countries to view

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