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# Creating Utopia or Gomorrah?

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Predictions of population growth have been widely discussed in recent years. The best estimates suggest that global population will increase from the current level of 7.3 billion people to around 9.5 billion by 2050, with a substantial migration from rural to urban living. The increase of urban population is likely to be 2.6 billion over the same period. By 2050 two-thirds of the world will live in cities.

Are our existing cities able to grow to this extent? Those that have grown up over centuries, such as London, Paris, Berlin and Moscow are already struggling to cope with their gradual inflation. Middle-aged conurbations like New York, Chicago, Los Angeles and Tokyo were originally planned with growth in mind, but their expansion over the last century must have outstripped the wildest visions of their architects.

Young cities, those created within the last 50 years, have been subjects of some fairly hairy social engineering experiments or even worse are the products of unplanned and unregulated growth such as the shanty towns around Johannesburg or Mexico City.

Old cities, by which I mean those that were originally grown before the development of the motor car, seem to have a limit of population of about 15 million people. For middle-aged cities, developed with motor transport in mind, the limit seems to be about 30 million people. Sadly there seems to be no limit to the size of shanty towns, but is this the future that we want for the growing urban population?

Future cities are depicted in two ways in popular culture. There is the beautiful, peaceful, functional metropolis of “Star Trek” or “I, Robot” and there is the dirty, seamy, crumbling danger-zone of “Bladerunner” or “The Fifth Element.” This is a real challenge for all buildings professionals including architects, town planners, building services designers and cold chain experts. We can choose to deliver future cities that we would like

to live in, or we can leave it to other forces to produce what we don’t want. William Hogarth illustrated these options in his 1751 etchings “Beer Street” and “Gin Lane” so this is not a new dilemma, but as yet we have failed to resolve it.

The difference now is that this pace of change is so rapid it has to be achieved within one generation. We need to create 64% more city dwellings than we have now, including the means to feed, clothe, power, employ and entertain this population. Merely inflating what we already have will not bring a successful result and in the worst case could lead to disaster. How can we improve our cold chain to make this growth possible? What do we need to do to be able to populate the uninhabitable places? Is it feasible without bankrupting our energy resources? Where will we arrive if we continue on our present path?

All of these questions can be addressed by making our cooling, ventilation and heating systems more economic, more reliable and more efficient. Addressing one of these factors without heeding the other two will not be sufficient to deliver the sustainable growth that we need. Smart engineers who are graduating now will be in senior positions of influence when we get to 2050. The way in which we live will have been determined by them and their colleagues. This means you! ■



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