

**Title:** Debating Tall: Is Sky City's Prefabricated Approach Viable for the Future of Megatall Buildings?

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# Is Sky City's Prefabricated Approach Viable for the Future of Megatall Buildings?

At the CTBUH London Conference in June, Chairman Zhang Yue of Broad Group presented on Sky City, the next-planned world's tallest building, to be constructed of prefabricated modules. While the schedule has pushed back and questions around the design and process continue to emerge, the Sky City project has already forced the industry to ask itself some serious questions. At the Conference, Ken Shuttleworth, principal of MAKE Architects and Bob Lang, director at Arup, offered opposing views on Sky City's applicability and advisability. The debate continues here...

### NO

#### Bob Lang

*Director, Arup, London*

The demand for space in New York and the Great Fire of Chicago presented opportunities to Sullivan and others and gave birth to the high-rise building as we know it today. Their ambition was to build high, only limited by the reliability of materials and the performance of elevators. Recent advances in technology and improved materials have loosened these restrictions and defined new challenges, particularly to the environment in which these buildings are located.

So what of an 838-meter prefabricated "Sky City," which is intended, quite literally, as a city in the sky? I would argue that, given what has motivated us in the past (and an increasing population) it is the next logical step for our industry – but not in the way Sky City envisions it.

History tells us there are cities and countries which have engaged with tall buildings to define their character. In recent times, the ancient cities of Europe appear to have grudgingly accepted them. The transport hubs and the railway stations of mature cities serve well the demands of moderately tall buildings. Building a "Sky City" in an established conurbation is likely to result in the infrastructure being overloaded. On the other hand, the new cities of Asia may be better suited; these cities can be designed to be capable of supporting such buildings. So the

800-meter tower has its place; it is just a question of where.

While prefabrication is a very important element in justifying the viability of megatall structures, it is but one part of a much wider pallet. To firmly secure their future, we must pursue – with equal vigor and intellect – how we minimize the demands on infrastructure and ultimately make all buildings more sustainable.

### YES

#### Ken Shuttleworth & Paul Scott

*Principals, MAKE Architects, London*

Mountaineers and polar explorers know that carrying the minimum weight on an expedition is crucial to saving energy, time, and resources. Pre-stocked stations en route provide the correct amount of supplies to sustain the explorers with the utmost efficiency. A Formula 1 racing car crosses the finishing line with an almost-empty fuel tank to minimize weight and optimize speed and agility.

Building mega-tall is also about moving swiftly and economically in sometimes arduous conditions. Prefabrication in construction – the art of manufacturing components of the highest quality in advance without unnecessary wastage – is learning from those who climb the tallest peaks, traverse polar regions or travel at sensational speeds.

The corollary should be the evolution of construction techniques to embrace prefabrication

on the scale of Sky City, making the approach both viable and essential for the future success of megatall buildings.

But it's not just about building tall – prefabrication's challenge is to deliver architectural excellence. In our quest for speed and economy in construction we must not forget that buildings are for people. There is no question that a prefabricated approach is viable for the future of megatall buildings from a logistical perspective, so designers need to seize the initiative and embrace the opportunities presented.

The prefabricated approach must be adaptable – capable of producing unique buildings in response to location and brief. Each building constructed using prefabricated techniques must also be designed as a piece of beautiful architecture, simply constructed in the most efficient way.

If Sky City leads the way in prefabricated megatall structures, the next generation of inspirational buildings should be more environmentally progressive, socially inclusive, and designed as truly versatile modular compositions.