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# Dynamic architecture, rotating tower: yes, but will it fly?

By Shellie Karabell

**For the past two years, David Fisher has made a name for himself by building towers in the sky. Literally.**

For, despite the earthly icons he's received for his architectural concept (Time Magazine Best Invention award in 2008 and a citation as Best Architect in 2008 by the Trump-supported Florida-based Developers and Builders Alliance), so far the 80-storey 1,300-foot tower exists solely in his lofty imagination. It's been there for a while.

"I guess it all started when I was five years old," says the 60-something Israeli-born Florence-based architect. "My mother used to take me to see the sunset every evening over the Mediterranean and I would sit there and have my dinner and watch the red sun going slowly into the water. This is when I started to think about movement – one day is going away, another is coming – and I started thinking about time. And I started thinking later, as an architect, that life changes, everything changes ... but buildings don't change; homes don't change."

Take a look at his bio and you'll see Fisher graduated from the University of Florence in 1976, lectured there in architecture and structural engineering, restored monuments, designed buildings, and ran a family company specialising in masonry and pre-fabricated construction materials before heading to New York in the early 1980s. One day in the Olympic Tower in midtown Manhattan, the idea for his Dynamic Tower really took shape. "I was looking at the spectacular view of New York City and the apartment owner said to me, 'You can see both sides of Manhattan. No one else has such a view,' and my social beliefs came out and I thought everyone could have such a view if we rotated the building. But it wasn't until I got home to Florence and put it on a computer that I began to understand that if I were to rotate every floor independently, that the building would actually change

shape continuously.”

Indeed, the tower in animation looks like a 3-D barber’s pole, undulating non-stop from the ground into the clouds. The floors rotate around a centre core, covering a vertical distance of around six kilometres a day – or up to some 2,000 kilometres per year. Technically, the activation and speed of each floor can be controlled by the apartment owner through a voice-activated password. Or, in the case of more than one unit per floor, by the architect or building manager.

And that opens up a whole can of aesthetic worms: who controls the shape of the building as it sits in the real world? Is this a zoning matter? A city planning agenda item? A political pickle? An exercise in democracy?

“The building will be shaped by life and designed by time,” says Fisher. “It’s everybody who will be able to shape the building. An architect 300 years from now will be able to re-shape it the way he wants it.”

Lofty words from someone who admits to not having practised architecture for the past 20 years and who has never built a skyscraper before designing this one. These were the bases for a media-bashing in June of last year in New York when Fisher first presented his Dynamic Tower to the world. Questions arose about his competency, the real functionality of the building, and the cost.

How, for example, is the plumbing constructed for a building that’s in constant motion and tied to a central column? “It’s like the refuelling of an aircraft in flight,” answers Fisher. “The toilets and water systems shut off periodically while the aircraft (read ‘apartment’) is in motion.”

Okay, so what powers the building and makes the floors spin? “Horizontal turbine engines,” he says. “One under each floor. So for the 80-storey tower, there are 79 horizontal turbine engines.” But so far such turbine engines do not exist, and past business practice suggests engineering research for such limited issue would be difficult to jump-start at a reasonable price.

That brings up the issue of the \$700 million construction cost. Fisher’s pockets are not deep, and he has indicated customer deposits would constitute a large part of his operating funds. So who is on his potential customer list? “Very wealthy people” says Fisher, without missing a beat.

“There are still plenty of them around. This will be a very luxurious building.” The cost per unit? “From 3 million to 30 million dollars,” he says. That’s about a million-dollar price drop at both ends of the spectrum from his initial announcement last year – before the economic crisis hit – when he told a media gathering he was certain of the imminent construction of Dynamic Towers, first in Dubai and then in Moscow. Now it’s the UAE, with construction to start by the autumn – both on-site and at a factory in Bari in southern Italy.

While the first tower(s) will be expensive, in the way of all prototypes, the next generations could be much less so, because this Dynamic rotating domineering Tower is pre-fabricated. “I call it ‘pre-assembled,’” he says, “because today ‘pre-fabricated’ means concrete beams. This will be like producing a car – you make the parts and then you assemble it in one place. This means lower costs, fewer workers: 90 workers instead of 200. In the future, all homes will be built like this – in a factory and then assembled.”

That means Fisher’s future customers could be different from the rich clients he’s looking to sign on the dotted line today. “My ideal customer in the future is the man who cannot afford a home today, because tomorrow he will be able to buy one of these.”

It seems to the lay onlooker that a gyrating, rotating 80-storey tower would use up a lot of energy and demand a lot of maintenance – not popular in these days when “less” is de rigueur. “The building will be energy positive,” claims Fisher. “The turbine engines underneath each floor (that is, the engines that have yet to be invented) will create enough energy to power the whole building. And ... 15 per cent of each unit will be exposed to the sun at all times, so we will have energy through photovoltaic cells on the roof of each floor.”

Yes, but will it see the light of day? On an engineering level, the structural engineer on the NY World Trade Towers and Shanghai World Financial Center, Leslie Robertson, told reporters last year that Fisher’s Dynamic Tower is “absolutely buildable. You can build anything.”

Then there’s the financial structure in an unfathomable recession. Fisher continues to focus on the long-term horizon: “I believe it will be easier to sell such a building because it is so unique,” he claims. “And besides ... I like challenges.”

*David Fisher was a speaker at the 7th World Investment Conference at La Baule, held June 3-5.*

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