Stack Modular

What causes housing crises?

Normally, this is twofold;
1.the costs to build is prohibitive.
2.the market prices to rent and buy are unaffordably high, this can be driven by a number of factors but always results from demand needs not being met by sufficient inventory.

Stack Modular

Stack Modular or 'Stack' is a 100% Canadian owned private company with no debt and 4 Shanghai Factories with the capacity to build 3,000 bespoke sized residential modules per year. Do not think of Stack modules as containers, they are not, they are bespoke residential modules designed for each project, a typical size is 11.1m (L) x 3.785m (W) x 3.48m (H) i.e. completely different from a container. Stack are represented by a 100% Bermudian multi generational owned local company.

Everything Stack needs to build a module can be sourced in China, including the steel for the steel modular construction, every component for the completed bathroom/kitchen/living area, flooring, wiring, lighting, heating, AC unit. These finished units leave our factory so you could walk through their entry door and live in them once installed on site.

Upon leaving the factory the modules get shipped to their destination jurisdiction on their own ship, untouched by any tariffs as they don't stop anywhere. Stack Modular make no money from shipping, we only make money on the modules leaving the factory and an initial Design Assist phase where we help advise as to what design is the best solution and helping get through planning (we have completed projects in 14 different countries so are experienced at meeting building codes). We specialise in delivering to difficult island locations, one current project is in Guam which is a category 5 hurricane/seismic/higher humidity than Bermuda location. Stack Modular won the MBI (Modular Build Institute) Hotel of the Year for its' Hotel and Conference Centre in Iqaluit, Canada.

The modules arrive at their destination at which point a General Contractor (GC) employed by the client takes them to site and places them on the prepared site and connects them/finishes them off for Certificate of Occupancy. GC costs are normally approximately the same as the Stack Modular and shipping costs combined. Stack Modular make no money from the GC or any on island activity but support the GC through to Certificate of Occupancy.

Note, >50% of fees are earned locally.

How government and Stack working together can solve a housing crisis

Relative to the rest of the world, and due to its geographical isolation and size, Bermuda has extremely high build costs of approximately $1,000 per square foot, and extremely high purchase costs of $900+ per square foot. You will already see that unless you can sell a new property for more than the standard sale price (i.e. build a luxury house) you can't easily build

and make a profit. You will also understand that persons working in lower paid professions may never be able to afford to buy a property.

What this also means is that because there are limitations regarding who can own property in Bermuda/develop property in Bermuda other factors feed into the market like well paid non-Bermudian insurance professionals pushing up rental prices. Bermuda's economy also needs to cater for the international market's housing needs as international business is a key part of the economy. Locals start to have an affordability of living crisis and may be forced to consider moving abroad. If working age people leave Bermuda an ageing population leads to further societal costs and problems, including pension funding issues. There are inherent vulnerabilities having a small island defined benefit government pension scheme, see later for a potential solution.

Stack Modular currently sell a bespoke sized 275 square foot finished module for $57,750 leaving their factory (calculated by multiplying $210 per square foot x 275 square foot). If you add $45 per square foot shipping then double this you get $140,250 for a finished studio which might normally cost $275,000 to build. Brand new quality family homes could potentially come in around the $300,000-$350,000 price point, this would be game changing for Bermudians. There is no limit on how many homes Stack can build.

Modular companies are volumetric, meaning their business models don't work without volume, hence why apartment blocks and hotels or large scale housing developments are the projects they are involved with. Stack Modular is no different and requires a minimum 100 modules order to fill a ship.

How the government can facilitate a solution to the housing crisis

If the government provided a budget of $14,025,000 a hundred studio apartments could be completed for the population (275 square foot studio x $510 all in cost inc Stack/shipping/local GC for a Certificate of Occupancy completed studio flat x 100 minimum order). The local Bermudian population could then buy the property from the government via a mortgage (if they need one) and then the government has been fully reimbursed and has no future liability because the property is now privately owned by the individual.

The Bermudian individual is now on the property ladder and could potentially pay off the mortgage within a decade. A 20% deposit would leave a mortgage of $112,200, 7% monthly repayment is $654.50 per month. This is a third of the cost of a rental property that isn't brand new and means not having to deal with a landlord, increasing rents, and potentially being asked to move out. Psychologically this is transformative, the individual is in control of a prime financial foundation of their life. All of the reduced outgoings are going towards paying off a mortgage for a home that you eventually own outright in retirement. This positively impacts affordability of living throughout life, leading to a better, healthier, and more successful life with more options.

Once all the units are sold, the government re-uses the money for another 100 unit order, and so on until the optimal amount of housing units/demand is achieved. (In reality an order of 300 units might better suit the government's immediate needs). Any unsold units could be used

for public housing until they are sold, or, just retained for use by the Bermuda Housing Corporation.

In this way the traditional build costs and prices of Bermuda don't form part of the housing roll out. By the government funding each build (before receiving all this money back) you import the cheapest houses in the world. Cheap doesn't mean nasty, it means the best value for money housing in the world. Stack Modular don't do nasty, we do quality, but we sell to you at China prices. Costs into the future are likely to remain as competitive as anywhere in the world due to the company being located in China.

Pension

Bermuda's public defined benefit pension has a current pension funding ratio of 67%. This is expected to reduce to 0% by 2042 without additional funding. While there is still funding capacity (particularly now as the equity markets are currently at a record highs and lower transfer values due to high gilt yields) why not consider offering members of the pension a defined contribution transfer value out if they agree to purchase an apartment. They don't have to accept it but then the government will need to 100% fund their income from year 2042. An apartment could either give pension members a home to live, or, a property to rent out. Even a lower level employee on a low salary having worked for only a decade in a public role may secure a DC transfer out value of $140,250. If it was you, would you personally prefer $140,250 at retirement age that might cover living expenses for 3-5 years and then be $0, or, receive a rental income every month of $2,000 (inflation proofed by the market) from now on (i.e. before your retirement date until death then passed onto your children or beneficiaries). Would this solution remove government's concerns regarding this individual's ability to have an income in retirement particularly if insurance for the property was mandatory? This removes the unaffordable cost of paying rent when retired.

Appearance

Regarding appearance. Bermuda roofs can be added, any facade any windows you want can be added, Stack buildings will add to the beauty of Bermuda not take away from it and can look exactly like a traditional Bermuda building if you want them to. You also have unconsidered options not discussed as of yet, for example, Marginal Wharf in St David's, significant number of units could be placed directly onto the already in place concrete (subject to structural engineer sign off) so you don't have to add nearly as much to the $210 module cost for finished buildings, Modular builds are 25% lighter than traditional build, even if this is not a BHC proposed site it could lead to a windfall for the government if sold into the Bermudian market, see below. Clearwater Beach is another location.

Below are 2 examples, a theoretical Hamilton City office block rebuild into residential, and a theoretical Bermuda Hotel that could be located anywhere. Look at the cost of build and the return, a potential windfall for the government for multiple sites in Hamilton City and elsewhere.

Cost
Indicative cost to build a 7 storey 87,000 sq ft with sellable/rentable 81,200 square foot of space is
Stack modular cost $210 x 87,000 = **$18,270,000**
(add more dollars per square foot depending on how much luxury you want but absolute top end on island equivalent is likely to come in at approx £325 max)($210 is not a bad quality finish BTW)
Shipping from Shanghai (we take no money on shipping) will be indicative $45 per square foot so $45 x 87,000 = approx $3,915,000
Local General Constructor (GC)(we neither appoint them, you do, and we don't take any money from on island work or the GC, you only pay us the $210 and the Design Assist, but we support the GC throughout the build and tell them how to prepare the site/connect the building etc) should cost the same as what you pay Stack + shipping so work on paying the GC $255 per square foot
Total cost for a completed building should be approx $510 per square foot
$510 x 87,000 = **$44,370,000**
(if you want parking underneath this will be extra)

Sale
The approx 81,200 square feet of apartment space should be sellable at current market prices for between $900 and $2,000 per square foot depending on what market it is built for
$900 x 81,200 = **$73,080,000**
$2,000 x 81,200 = **$162,400,000.00**

Options
Each floor has approx 11,600 square feet of sellable space so if you want to build 10 or 12 floors or even higher add that and then use the selling rates I have given you
Or, if you want to build fewer floors, likewise in the other direction

<u>Hotel</u>
Indicative costs
4 floors of modules
146 modules (**128 hotel rooms)**
Stack cost 65,600 sq ft x $255=$13,776,000
Shipping cost 65,600 sq ft x $45=$2,952,000 (Stack earn zero from this)
Double these two costs for on island General Contractor work (Stack earn zero from this)
Total build cost until Certificate of Occupancy $33,456,000

<u>Hotel</u>

Lower room rate

Average occupancy rates island wide throughout the year are 60% or just above.

If the hotel was the cheapest offering on island at say $299 per night then occupancy might climb to 80% not 60%

$299 x 128 x 365 x 0.80 =**$11,175,424** hotel room revenue

Higher room rate

if you wanted to charge $700 (mid tier rate for Bermuda) and have 60% occupancy $700 x 128 x 365 x 0.60 =**$19,622,400**

Potential hotel sale value

Lower room rate

$299 at 80% occupancy rate
$11,175,424 revenue
50-55% GOP margin (higher than a full service hotel)
Cap rate of 6.5%-8.5%, 12-15 x EBITDA
at x 12 EDITDA $67,000,000
at x 15 EBITDA **$91,000,000**
equating to
$67,000,000/128 =$523,000 per room
$91,000,000/128 =**$711,000 per room**
bear in mind each finished room landing at Bermuda port cost you $255 x 452.2 square feet =**$115,311** to see the significant ROI
Estimated sale price $70,000,000-$90,000,000

Higher room rate

$700 at 60% occupancy rate
$19,622,400 revenue
50-55% GOP margin (higher than a full service hotel)
Cap rate of 6.5%-8.5%, 12-15 x EBITDA
at x 12 EDITDA $118,000,000
at x 15 EBITDA **$162,000,000**
equating to
$118,000,000/128 =$922,000 per room
$162,000,000/128 =**$1,270,000 per room**
bear in mind each finished room landing at Bermuda port cost you $255 x 452.2 square feet =**$115,311** to see the significant ROI
Estimated sale price $120,000,000-$160,000,000

I would like to make the point the revenue is higher from one finished module (1 room) in 1 year than it costs you to purchase the finished module (one module is one hotel room) from Stack landed at Bermuda port.

Stack are represented by a 100% Bermuda owned local company. Stack work fast. Projects can be delivered start to finish very quickly.

Contact

If you would like to discuss this more please contact me at info@pinkbermuda.com

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design studies : unit renderings

ASSEMBLAGE
WORKS