# JOIN THE **REVOLUTION**

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# MODULATION

# EXECUTIVE SUMMARY

Imagine children's building blocks could be used in real life – where each block was a fully finished home, office, hotel or hospital space which simply locked together for total structural integrity.

A building system which can work side-by-side as single level dwellings, or more significantly be 'stacked' like giant building blocks to build apartment towers.

Now, forget any preconceptions of modular being like glorified shipping containers, and think on a much larger scale – commercial buildings, office towers and residential high-rise.

Modular, prefabricated or kit construction is nothing new. It has been around since Roman times. Over the last century or so, various forms have gained popularity in different countries, and in some such as Sweden it has become the leading method of construction.

Today, modular has been sufficiently refined and improved to the stage where it is a proven and preferred construction technique in everything from the passenger cabins on cruise ships like the Queen Mary 2 through to McDonalds restaurants that can be constructed in less than 24 hours.

This new wave of modular enthusiasm is growing exponentially because it **defies just about every preconception** people may have from past experience. This includes everything from new advanced crane technology allowing for much bigger modules through to absolute customisation and individualisation of modules for genuine architectural significance.

Even the traditional negative perceptions of modular are changing as people realise it delivers an impressive looking quality finish with **two huge benefits** – speed of construction and cost savings

The Modulation<sup>™</sup> System has been developed via a global research and development quest to source best-of-the-best technologies, engineering and logistics to deliver a unique product that literally 'locks like Lego' for speed of construction.

### Quite simply, The Modulation<sup>™</sup> System redefines the future potential for modular construction.

Right now in 2018, the Australian construction industry is collapsing under the burden of excessive costs at every stage of the building process – holding costs, labour costs, material costs, and wastage. About the only problem the Modulation System can't solve immediately is land costs – however, thanks to the system's innate design portability, it can be utilised as a 'meanwhile use' building where land costs are minimal.

As a new construction technique, The Modulation System is without peer, and the ground floor investment on offer is an exceptional opportunity as it is bound to be the **biggest disruptor in construction** since the invention of concrete.

# THE OPPORTUNITY

Australia desperately needs a faster, more affordable building process.

This revolutionary modular construction technology is calculated to be around 30% cheaper than traditional concrete construction.<sup>1</sup> Plus, because it is delivered to the site fully complete, it can be constructed one floor per day after foundation preparation.<sup>2</sup> Also, since modules are pre-assembled in a factory, time-loss caused by bad weather is virtually eliminated – further reducing costs. Add to this the fact that the factory method allows for more precision via computer-aided and robotic engineering, and you have not only a faster method of construction but a superior quality one. The concept of 'the bad tradesman' becomes a thing of the past.

From a purely financial viewpoint, **the speed of construction significantly reduces all those 'holding costs' (land rates) and finance costs** which can be every developer's nightmare. With approximately 90 days turnaround from ordering modules from the factory to landing in your country, this is a construction process that due to its efficiencies and cost savings will genuinely disrupt the entire industry. To sum it up, modular is exactly what the construction industry needs to compete.

Anywhere there is a foundation, there is an opportunity to build a Modulation<sup>™</sup> System construction – and also to easily deconstruct it and move it on to another site.

### The list of possibilities is endless, but here a few:

- > Government departments
- Social housing
- > Real estate developers
- > Universities
- > Hotels
- > Residential estates
- > High-rise residential towers
- > Townhouses
- > Student accommodation
- > Meanwhile-Use communities
- > Department of Defence housing
- > Essential services housing
- Hospitals
- > Emergency disaster-relief accommodation



In Sweden, more than 80% of new stand-alone houses are modular, and the trend is increasing throughout Europe. As Australia is always seen as an 'early adopter' country for all thing new and advanced, it is a natural market for quick adoption of modular as soon as its many benefits are revealed. This represents a huge opportunity as **the multi-storey construction industry is virtually an untapped market**.



<sup>1.</sup> Based on the estimated average cost of constructing the tower structure for a typical high rise tower when using the Modulation System (\$3,000 per square metre) compared to traditional concrete construction methods (\$5,000 per square metre). 2. Based on the estimated time required to assemble the tower structure for a typical high rise tower with 8 modules per floor if only one crane is used. The actual speed of assembly may differ depending on factors such as the number of modules per floor, the number of cranes used and your site-specific needs.

# THE MODULATION<sup>™</sup> SYSTEM

The Modulation<sup>™</sup> System is a revolutionary building system that saves time and money. Well-designed, aesthetically pleasing, and engineered to the quality standards of any other construction technique these buildings answer so many issues that face the construction industry – from costs to available land. **Modulation<sup>™</sup> improves every aspect of the construction process.** 

The Modulation<sup>™</sup> System isn't about reinventing the wheel, rather it is about refining processes and products to deliver a whole new experience – it's a bit like going from the mobile phone to the smartphone where nobody knew they actually needed it until it was launched. The construction industry certainly isn't expecting something as game changing as the Modulation<sup>™</sup> System.

The Modulation<sup>™</sup> designers and engineers have developed a system that utilises proprietary products that have already been tried and tested. As such, **it is a construction system and not a product.** 

It is disruptive to the conventional building procurement and methodology in that it is so much faster and cheaper, and therefore provides a significant saving in finance and holding charges - which together traditionally make up approximately 5-10% of project costs.

## HOW MODULATION<sup>™</sup> REDUCES COSTS\*

Because all the fit-out and finishes are completed in the factory prior to shipping, the building time is dramatically reduced – plus far fewer workers are required as it is an assembly process. **All that is required is a crane and workers** to lock the modules together.

For example, once a foundation is established, it is feasible to be able to build a high-rise tower one floor per day.<sup>3</sup> How will that level of efficiency revolutionise the industry? **Assembly is up to 60% faster than traditional building.**<sup>4</sup>

All that is required for high-rise construction is a slab (or slab plus basements) and the Modulation<sup>™</sup> System is simply balanced, stacked and locked above. The modules are individually supportive so engineers don't have to rely on structural columns.

For example, in hotel construction, the basement and open-plan lobby levels can be built traditionally, then modular rooms added on top. Modelling estimates indicate a 5 star hotel room that is fully equipped costs around \$550K – The Modulation<sup>™</sup> System can achieve the **same result for around one third that price.** 

3. Based on the estimated time required to assemble the tower structure for a typical high rise tower with 8 modules per floor if only one crane is used. The actual speed of assembly may differ depending on factors such as the number of modules per floor, the number of cranes used and your site-specific needs. 4. Based on the estimated average time required to construct the tower structure for a typical high rise tower when using the Modulation System (6 months for assembly) compared to traditional concrete construction methods (18 months for assembly).

\*The data and projections should be used as a guide only and should not be relied upon in making investment decisions. We do not guarantee the performance or success of the proposed investment, the repayment or maintenance of capital or the achievement of any rate of investment return. Any offer for sale and/or acquisition of the Asset must be made in accordance with the Act, the Fund's Constitution and any other applicable regulatory or legislative requirements. The information contained in this document has been prepared for general information only and should be read in conjunction with the Information Memorandum ("IM") for the project. It does not consider any person's current or future financial circumstances or tax position. You should consider these matters and read the IM for the Fund before you make an investment decision on holding or acquiring units in the Fund. No information contained in this document is intended to induce you to invest in the Fund.

This is a typical example of a site with a proposed 285-room 5 star hotel with all facilities and amenities excluding site costs.

# CASE STUDY

#### IMPORTANT NOTICE AND DISCLAIMER

The case study is intended as a guide only and an aid to further investigation. The information in this case study is of a general nature and does not purport to be complete nor does it contain all the information which you may require in deciding whether to use the Modulation system or possibly invest in Modulation. You should make your own enquiries and obtain your own independent advice.

To the extent that this case study includes any statement as to a future matter, that statement is provided as an estimate and/or opinion based upon the information known to APDC at the date of preparing this study and based on assumptions which APDC considered to be reasonable at the time.

To the maximum extent permitted by law, APDC does not make any warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in the case study.

This case study compares the estimated costs for between a hotel built using conventional concrete construction and the same building by Modulation<sup>™</sup>. The key difference is the construction costs and construction period. By reducing the time and costs of construction, Modulation<sup>™</sup> allows builders and developers to save on holding charges<sup>1</sup> and interest and finance costs<sup>2</sup>.

#### Assumptions about the conventional inputs are as follows:

- Construction costs of \$5,000/sqm
- > Construction period of 18 months excluding design or lead time
- > Holding charges of \$3,500,000
- Interest and finance costs of \$7,982,012
- > This resulted in a *net loss of [-16.30%]*

### For Modulation<sup>™</sup>, we only changed the following inputs:

- Construction costs of \$3,000/sqm
- Construction period of 6 months

This resulted in the following savings:

- Holding Charges of \$1,500,000 (a saving of 57%)
- Interest and Finance costs of \$3,710,604 (a saving of 54%)
- > This resulted in a net profit of 20.10% (an increase of 36.4%)

The flow-on of these savings is shown in holding cash-flow, whereby for the example above; the Modulation<sup>™</sup> hotel will demonstrate positive cash-flow in half the time of a conventionally constructed hotel:

Conventional = after Year 10 Modulation = Year 5

1. Holding charges consist of land rates.

2. Interest and finance costs include interest, brokerage fees, any mortgage duty and valuation costs.

See Annexure C for more details.

# NEW USES AND NEW OPPORTUNITIES

At first glance, the concept of being able to assemble and dismantle the Modulation<sup>™</sup> System sounds ideal for short-term accommodation or office needs.

However, the quality of the modules means that the construction has **all the engineering hallmarks of a permanent structure** - yet it is removable and readily relocated.

One of the most exciting benefits of the Modulation<sup>™</sup> System is how it can be utilised to maximise the usage of urban landscapes in their "Meanwhile" stage of development. Because it is relatively easy and **inexpensive to dismantle and transport**, it can be adapted to different sites and different building configurations as needed. The opportunity is to **breathe new life into dormant land** everywhere though Meanwhile usage. Meanwhile is the term for lands owned by councils, governments or enterprise that are sitting dormant awaiting some future infrastructure or development. For example, land zoned for a future freeway that is ten years off can be used for public housing or other socially valuable facilities.

Although a relatively new concept in Australia, countries such as Great Britain are rapidly embracing the potential for Meanwhile Spaces. Here are some links showing how innovative this can be when utilising modular building techniques.

See Annexure B for examples.

# **REGULATIONS & GOVERNMENT APPROVALS**

An application has been lodged via the National Codemark Scheme.

This includes:

- > Approval for factory systems and compliance
- > Fire rating
- > Structural certification
- > Thermal performance
- > Glazing performance
- > Section J of the Building Code of Australia
- > Acoustic performance

A global patent is also pending for approval.

Another stringent requirement for multi-level developments is fire safety, and the Modulation<sup>™</sup> System has an engineered solution – including the structural integrity of the rest of the building should one module burn down.

# MARKET POTENTIAL

Right now, in the first quarter of 2018 there is nothing that comes close to Modulation<sup>™</sup> in terms of quality, aesthetics and delivery. There are a number of successful prefabricated construction companies who are members of the Modular Building Industry Association of Australia, but none have the proprietary methodologies of Modulation<sup>™</sup> featuring Invisi-Floor<sup>™</sup>, Dynamic Strut<sup>™</sup> and Contra-Form<sup>™</sup> engineering – all of which synergistically combine to take modular construction to the next level of performance and aesthetics.

Based on these product benefits, the results of a 2017 research study (the first of a proposed two part research exercise) by academics from UNSW's Faculty of Built Environment and the CRC for Low Carbon Living examined the performance and perception of OSMH (Modular) internationally, including in Australia, using the medium of an exploratory industry survey on sustainability and affordability. Although they acknowledge the challenges to more widespread adoption in Australia of OSMH systems, they say: "Prefabrication of off-site construction can offer great opportunities for both environmental and economic performance and hence is emerging as an attractive alternative to on-site construction."

The share of OSMH in overall construction output is strong in some established markets overseas, such as Japan, Austria, Germany, Sweden and certain other European countries. The Australian market for OSMH is still emerging and remains somewhat fragmented, with a lot of smaller (boutique) market participants and a few larger builders.

Australia's so far limited volume of demand, and consequent lack of supply continuity, have to date not justified large-scale factories producing OSMH. The cost of making OSMH product is likely to reduce as the volume and continuity of production increases, and economies of scale are thereby gained.

Modulation<sup>™</sup> Systems have addressed this issue by partnering with large established manufacturers in the USA and China that do not rely solely on Australian orders and that have additional capacity to service both the domestic and global markets.

The study captured industry participants' opinions on the constraints holding back growth of the prefab industry. The highest ranked constraint was the reluctance or lack of awareness/training/experience of builders, contractors or developers. Other key constraints included policies of lenders, societal perception issues and risks in adapting to new processes and systems and reluctance or lack of awareness/training/experience of designers, including architects and engineers. The study identifies specific gaps in the area of design and decision support systems which could aid in delivering high performance prefabricated homes.

In any rational forum, the benefits of the Modulation<sup>™</sup> System are inarguable.

From the affordability and portability aspects to superior performance in earthquake or cyclone prone areas right through to social considerations, this is genuinely a future path for construction.

## THIRD-PARTY COMMENTARY ON THE FUTURE OF MODULAR

Following is a list of links to articles written by industry experts which provides a glimpse of the their vision of the construction landscape.

Dr Stefan Hajkowicz is a Senior Principal Scientist at CSIRO, exploring future trends, risks and scenarios to help businesses plan for change fears that the traditional construction industry could go the way of Kodak and the Swiss Watch industry if it doesn't adapt to new thinking.

http://www.csq.org.au/news-events/news/prefabricated-versus-conventional-building---the-b

Australia's leading home building industry body, the HIA is of the belief that prefabricated housing will increasing by 10 – 20% over the next 10 years.

https://www.realestate.com.au/news/whats-happening-world-prefab-housing/

The following links provide statistics reflecting the positive global growth patterns in pre-manufactured housing. Individual countries with similar attitudes such as Canada and USA provide parallels with the local market.

http://www.strategyr.com/MarketResearch/Prefabricated\_Housing\_Market\_Trends.asp

http://www.cmhi.ca/statistics-0

USA's National Association of Realtors has compiled a dossier of research papers which assess the growth of modular and how they impact the 'values' of neighbourhoods featuring traditionally built homes. In a nation that thrives on architecturally homogeneous communities, it seems modular is appreciated as a statement of individuality.

http://infoservices.blogs.realtor.org/2012/10/10/research-on-modular-housing/

### CHALLENGES AND COMPETITIVE LANDSCAPE

The main hurdle is an obvious one - and the major driver for venture capital funding.

That hurdle is Banks.

To put it bluntly, there is nothing in it for them - because banks make their billions off the years of interest and holding costs inherent in traditional construction methodologies.

If a building is erected in weeks instead of years, then there is **no incentive or upside for banks.** Add in the Modulation<sup>™</sup> System of lease-back for investors, portability and longevity of modules, and you can see that this may be a disruptor for traditional financial institutions as well.

It is also natural that with efficiencies, come other impacts.

One will be the scaffolding industry, and another the employment levels of the construction industry. This will mean Modulation<sup>™</sup> Systems will not easily win the hearts and minds of Trade Unions.

This, in turn could inspire some political pushback.

However, the **genuine social and economic benefits** are more than sufficient to overcome this pushback to change.

Consumer attitudes are another potential constraint to initial take-up, however with price being the biggest issue in real estate, the lower cost of modular will no doubt overcome that – particularly once people see that the Modulation<sup>™</sup> System is as high quality, durable, precision engineered, digitally designed and efficient as conventional construction.

In terms of direct competition, yes, there are other modular manufacturers.

However, the key point to remember is that Modulation<sup>™</sup> is a not a manufacturer - rather it is a

**'best of the best' procurement and sourcing specialist** that utilises more advanced engineering to deliver a superior product.

The system has the potential to be copied or replicated – however, by the time any newcomer got up to speed in sourcing, approvals, and logistics, Modulation<sup>™</sup> would already be established as the pre-eminent brand and the leader in every sense.

Once the potential dimension of market demand is taken into account, it is fair to say there would be room for plenty of competitors.

There are also a number of alternative prefabricated systems on the market, and each comes with pros and cons. These include panelised systems where pre-prepared components are assembled on site. These systems can be easily customised and are cheaper to transport. However, they are potentially difficult to disassemble and relocate.

See ANNEXURE D for a list of Australian Modular Construction companies.

See ANNEXURE E for examples of completed commercial modular projects.

### THE FINANCIAL EQUATIONS

These days, developers struggle to get 20% gross margin on conventional constructions. In tight markets, some work on 10 or even 5%.

Those margins are not sustainable and actually threaten the industry.

The advantages of our Modulation<sup>™</sup> system include cost savings and/or sustainability benefits arising from:

- Significantly increased speed of construction, compared to conventional construction methods. Construction times can be shortened because most construction phases (and multiple units) can be delivered simultaneously, rather than consecutively.
- > Significant reduction and savings in construction materials wastage
- Modules manufactured under factory-controlled conditions, allowing tighter specifications than can typically be achieved from traditional on-site construction methods
- > Relative independence from weather conditions
- > Reduced disruption to local traffic and neighbouring sites or activities

# FLEXIBLE BUILDING AND FLEXIBLE FINANCING

When a developer chooses Modulation, they also have access to a whole new world of financial and future flexibility, including:

- > They will invest in a modular building
- > The modules will be leased to the end user
- > The term of the lease can be 5 10 years
- > On expiry of the lease the modules can be dismantled then relocated to another site with a new lease signed
- > The make good provision would be the ground /transfer slab
- > The investor would not be locked in to the traditional location risk if they were to invest in a conventional building

# CONCLUSION

The Modulation<sup>™</sup> System is a business structure that can deliver for investors time and time again as modules are repurposed, refurbished and reinstalled at different locations – which allows new income streams to be created.

### At its most basic, as an alternative to traditional construction, it is a game-changer.

It is not an exaggeration to suggest the sky is the limit in terms of potential. With soaring construction costs, traditional construction methods need to change, and fast.

The quicker The Modulation<sup>™</sup> System can get to market, the more it can be at the forefront of this muchneeded revolution. It has the potential to be a major disruptor to the building industry. Disruptor ideas are changing the world. Think Uber, Think Tesla. From what has been presented in terms of market potential, it's no real exaggeration to suggest this could be the big disruptor to the world's biggest industry.

# THE INVESTMENT OPPORTUNITY

**This is a Shock & Awe opportunity.** It must hit the market with dimension, scale and delivery. Not just in marketing and promotion, but in actual demonstration. The first buildings will be the benchmarks that define future success. Investors are required to fund this, the biggest disruptor to construction since the invention of concrete.

- > The investment allows income streams to be created
- > The investment suits:
  - > High net worth individuals
  - > Superannuation funds
  - > Institutional investors
  - > Venture capitalists

#### REIT Capital Feasibility Analysis Finance Facility



Project Month

www.modulation.com.au

# ANNEXURES

# ANNEXURE A

# THE MODULATION<sup>™</sup> MANAGEMENT TEAM

### > Peter Yassa

Peter Yassa brings more than 25 years of extensive property development and investment experience across a plethora of sectors including residential, commercial, industrial, retirement, leisure and hospitality, as well as community projects. His work spans the globe, from the eastern seaboard of Australia and the South Pacific, much of Asia, Europe, North America and the Middle East.

Over the past 25 years, Peter's roles have entailed all aspects of acquisition, investment and portfolio management. Between 1997 and 2001, Peter was the recommended Development and Portfolio Manager for Shanghai, China, dealing directly with the Ambassador of China and local governments in Australia for major government projects.

From 2006, Peter conducted real estate audits for Hilton World Wide, Club Med and other hotel chains on their properties in the Asia Pacific region. An accredited specialist in managed investment schemes, Peter has solid experience in capital raising and handling of client funds, risk management, and investment strategy development.

All of this is backed up further by years of experience in Design (as a qualified Architect and Specifier), in Construction Management (as a licensed Builder) and also several years in the Real Estate industry (as a licensed Sales and Assistant Property Manager). Peter is also a qualified Arbitrator in Building Dispute Resolution.

### > Simon Slavin

With a property and real estate career spanning more than 40 years, Simon brings unsurpassed vision and expertise in the design and development of residential, commercial and industrial developments.

Demonstrating exceptional foresight, Simon acquired the largest holding in Sydney's Homebush Bay waterfront precinct in the mid-1990s as a director of Fairmead Pty Ltd, alongside Ruven Laps. When acquired, the 109,700 sqm holding included 60,000sqm of lettable warehousing, providing key storage and distribution services for some of Australia's leading banking, transportation and technology companies.

The holding was also home to Waterfront Studios, which under Simon's creative vision and direction, became the Southern Hemisphere's largest film studio at the time and produced the TV series Farscape as well as numerous feature films.

Testament to Simon's vision for the area as a mixed-use precinct, this holding was subsequently rezoned and developed to provide thousands of luxury apartments, a retail and commercial hub, community parklands and a private wharf.

Simon's original early planning for the area included designs for a bridge from Homebush Bay to Rhodes, linking the Olympic Village, Newington and neighbouring developments. This plan to better connect the area and create synergies between its waterfront, retail and transport links is now being realised with the construction of the Homebush Bay Bridge.

# **ANNEXURE B**

### EXAMPLES OF MEANWHILE USE DEVELOPMENTS.

http://www.elephantandcastle-lendlease.com/meanwhile-uses

https://www.brent.gov.uk/your-council/partnerships/meanwhile-brent-partnership-and-the-meanwhile-foundation/

https://www.meanwhilespace.com/

http://www.meanwhile.org.uk/

http://croydonmeanwhileuse.org.uk/

http://www.regenwales.org/upload/pdf/090815102321Meanwhile%20Use%20in%20Wales%20-%20Summary%20 and%20Guidance.pdf

## **ANNEXURE C**

Summary of Potential Financial Benefits

	Project: Hotel,	Conventional		
	Key Financ	ial Drivers		
Costs		% of Total	Sales	
Land:	\$25,000,000	19.2%	Gross Realisation	\$ 114,750,000
Development:	\$19,646,249	15.1%		
Construction:	\$70,875,000	54.4%	Nett Rent less Incent.	\$0
Hard Costs:	\$115,521,249	88.7%	Selling Costs:	-\$5,739,100
	· · ·		Net Realisation:	\$109,010,900
Acquisition:	\$2,097,990	1.6%		
Holding:	\$3,500,000	2.7%		
Finance:	\$7,982,012	6.1%		
Marketing:	\$1,147,855	0.9%		
Soft Costs:	\$14,727,857	11.3%		
Total Project Cost Pofero Interest	\$124 512 031			
	\$124,512,951		Net Des 64	AA4 AAA AA7
Total Project Cost:	\$130,249,107		Net Profit:	-\$21,238,207
			Net Profit % (ROC):	-16.3%
Finance			Project Duration	
Maximum Loan Drawdown	\$84,874,275		Site Settlement Date	1-Feb-2017
Maximum Drawdown Month	21		Construction Start	1-Feb-2017
Loan Repaid Month:	23		Construction End	31-Aug-2018
Interest Paid:	\$5 736 176		Project End	30-Nov-2018
First Mortgage	\$59,411,992	70.0%	of TPC	
Second Mortgage:	\$0	0.0%	of TPC	
Investor Equity:	\$39,074,732	0.070		
Linit Type	No. Of Units	GBA m <sup>2</sup>	Average Sales Pate \$/m <sup>2</sup>	1
Pesidential Units			Average Sales Rate with	
Commorcial Units	0	12500	φυ \$8,500	
Commercial Other	0	0300	\$0,500 \$0	
Mantager Free Street	0/ - 5 700	Interest D-t-		1.10
wortgage Funding	% of IPC	Interest Rate		
ist Mortgage	/0%	7.0%	64.8%	//.4%
2nd Mortgage	0%	0.0%	0.0%	0.0%
Blended	70%	7.0%	64.8%	77.4%
Construction Stages			Selling Stages	
Stage 1 Start	1-Feb-2017		Stage 1 Start	23-Nov-2018
Months	18		Months	1
Cost	\$ 67,500,000		Sales	\$114,750,000
Total Construction	\$ 67,500,000		Total Sales	<u>\$ 114,750,000</u>

# ANNEXURE C (CONTINUED)

	Project: Hotel,	Modulation		
	Key Financ	ial Drivers		
Costs		% of Total	Sales	
Land:	\$25,000,000	27.5%	Gross Realisation	\$ 114 750 000
Development:	\$14 784 224	16.3%		φ 111,700,000
Construction:	\$42 525 000	46.9%	Nett Rent less Incent	\$0
Hard Costs:	\$82 309 224	90.7%	Selling Costs:	-\$5 739 100
Hard 00313.	\$02,000,224	00.178	Net Realisation:	\$109.010.900
Acquisition:	\$2,097,990	2.3%	Not Realisation	¢100,010,000
Holding	\$1,500,000	1.7%		
Finance:	\$3,710,604	4.1%		
Marketing:	\$1 147 855	1.3%		
Soft Costs:	\$8,456,449	9.3%		
	,, .			
Total Project Cost - Before Interest	\$88,659,336			
Total Project Cost:	\$90,765,674		Net Profit:	\$18,245,226
				00.49/
			Net Profit % (RUC):	20.1%
Finance			Project Duration	
Maximum Loan Drawdown:	\$57,396,161		Site Settlement Date	1-Feb-2017
Maximum Drawdown Month:	9		Construction Start	1-Feb-2017
Loan Repaid Month:	11		Construction End	31-Aug-2017
Interest Paid:	\$2,106,338		Project End	30-Nov-2017
First Mortgage:	\$40,177,313	70.0%	of TPC	
Second Mortgage:	\$0	0.0%	of TPC	
Investor Equity:	\$27,229,702			
Unit Type	No. Of Units	GBA m <sup>2</sup>	<sup>2</sup> Average Sales Rate \$/m <sup>2</sup>	
Residential Units	0	ſ	\$0	
Commercial Units	1	13500	\$8.500	
Commercial Other	0	(	\$0	
Mortgage Funding	% of TPC	Interest Rate		LVR
1st Mortgage	70%	7.0%	63.0%	52.4%
2nd Mortgage	0%	0.0%	0.0%	0.0%
Blended	70%	7.0%	63.0%	52.4%
Construction Stages			Selling Stages	
Stage 1 Start	1-Feb-2017		Stage 1 Start	23-Nov-2017
Months	6		Months	1
Cost	\$ 40,500,000		Sales	\$114,750,000
Tabal Construction	40 500 600		Tatal Calas	* 114 750 000
	<u> </u>		Total Sales	<u>&gt; 114,/50,000</u>

# ANNEXURE C (CONTINUED)

Hotel															
Summary Analysis AUD 000's	otals Inpu	rt Page	Diffs		Year 1 Dec 18	Year 2 Dec 19	Year 3 Dec 20	Year 4 Dec 21	Year 5 Dec 22	Year 6 Dec 23	Year 7 Dec 24	Year 8 Dec 25	Year 9 Dec 26	Year 10 Dec 27	total
Acquisition Costs	\$ 2,097,990 \$	2,097,990 \$		~	2,097,990	ŵ	<b>.</b>	<b>9</b>	<b>9</b>	<b>9</b>	•	<b>9</b>	<b>9</b>		
Development Costs Finance Costs	\$ 19,646,249 <b>\$</b> \$ 7,982,012 <b>\$</b>	19,646,249 \$ 7,982,012 \$	• •	\$ \$ \$	19,646,249 7,982,012										
Marketing Costs Fund Establishment Fee	<pre>\$ 1,147,855 \$ \$ \$ 4,742,196 \$ </pre>	1,147,855 \$ 4,742,196	`	3.5% \$	1, 147, 855 4, 742, 196										
Design FF+E	\$ - 4,000,000 \$	4,000,000		\$ \$ \$	4,000,000										
Construction Phazing (Incl Contrigency)	\$ 39,616,302			v, v,	39,616,302										
Stage 1 Start	\$ 70,875,000 \$	70,875,000 \$		\$	70,875,000										
large 4 Start Stage 5 Start															
Cotal	\$ 70,875,000 \$ 110,491,302 \$	s	·	•• ••	70,875,000 \$ 110,491,302 \$	07 09 1 1		99 99 1 1	99 99 1 1	•• ••	•• ••	•• ••	•• ••		
and Payments 25,000,000	Date 01-Feb-17			ŝ	25.000.000										
	01-Feb-17 01-Feb-17 01-Feb-17			\$	1										
fotal Land payments	\$ 25,000,000	Total L	ess Equity ShortFall	\$	25,000,000 \$	99 1	9 1	1	••		9 <b>9</b>	<del>ه</del>	99 1		
otal Capital Costs PC Cumulative	\$ 135,491,302	\$	135,491,302	\$ \$	135,491,302 \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	- \$ 135,491,302 \$	135,491,302	
Jebt Required Jurnulative Debt	Ratio 52%	\$	70,491,302	135,491,302 62.0% \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 \$ 70,491,302 \$	70,491,302 70,491,302	
equity ratio 2umulative Equity	48%	ŝ	65,000,000	48.0% \$	65,000,000 \$ 72,502,399 \$	65,000,000 \$ 70,491,649 \$	65,000,000 \$ 68,989,205 \$	65,000,000 \$ 68,716,021 \$	65,000,000 \$ 68,418,878 \$	65,000,000 \$ 68,090,294 \$	65,000,000 \$ 67,751,852 \$	65,000,000 \$ 67,403,258 \$	65,000,000 \$ 67,044,205 \$	65,000,000 66,674,381	
katual Equity Cantholded Inc. Shortfall Debt Required Equity Required				ee '		*					1				
Property Level Cash Flows Resort Operating Profit	\$/m2	a2	Income	Growth 100.0%											
EBITDA					6,869,275	8,880,025	10,382,468	10,655,653	10,952,796	11,281,380	11,619,821	11,968,416	12,327,469	12,697,293	
squity shortfall Contributed F&E Reserve				(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	(200,000)	
	4								1.00 M 400 M 400					\$	
Operating Income Hedge	\$				6,669,275	8,680,025	10,182,468	10,455,653	10,752,796	11,081,380	11,419,821	11,768,416	12,127,469	12,497,293	
Interest Senior Debt Interest Mezzanine Debt	70,491,302 65,000,000	8.00%			(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	
Total Interest		*	56,393,042		(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	(5,639,304)	
building waragement ree		1.50% (1	20,323,695)		(2,032,370)	(2,032,370)	(2,032,370)	(2,032,370)	(2,032,370)	(2,032,370)	(2,032,370)	(2,032,370)	(2.032,370)	(2,032,370)	
Project Cash Plow Before distribution Project Cash Plow Before Distributionn - Cumulative Province Cash Flow Before Distributionn -			28,917,859		(1,002,399) (1,002,399)	1,008,351 5,953 24/	2,510,795 2,516,747	2,783,979 5,300,726 302,	3,081,122 8,381,849 597	3,409,706 11,791,555 59/	3,748,148 15,539,703 20,	4,096,742 19,636,445 59,	4,455,795 24,092,240 730	4,825,619 28,917,859 72/	
eaum on Equity (ROI) - teturn On Equity (ROI) - Cumulative					%L-	%7 %0	4%	4% 8%	5% 12%	5% 17%	e% 23%	6% 29%	36%	43%	
nvestor Prefered Return katual Investor Return	ş	65,000,000	Hurdle 10.00% \$ \$	65,000,000 28,917,859	6,500,000 (1,002,399)	6,500,000 1,008,351	6,500,000 2,510,795	6,500,000 2,783,979	6,500,000 3,081,122	6,500,000 3,409,706	6,500,000 3,748,148	6,500,000 4,096,742	6,500,000 4,455,795	6,500,000 4,825,619	
rivestor Yield rivestor Shortfalls			*	36,082,141	-1.54% (7,502,399)	1.55% (5,491,649)	3.86% (3.989,205)	4.28% (3.716,021)	4.74% (3.418.878)	5.25% (3.090,294)	5.77% (2,751,852)	6.30% (2,403,258)	6.86% (2,044,205)	7.42% (1.674.381) -\$	36,082,14
Controllarve Growtoon Net Cash Flow		6			(per mr')	( 160%600/71)	(00,400,00)	( to 17 000 (n.7)	(101,011,12)	(nut (nn ( 1 )	(107'000'07)	(nnn' nnr' zn)	(00.1100-100)	(141,200,000)	
Equity Shortfall (to maintain distribution)															
2 ash Balance Requirement			2,371,098												
2 ap Rate Selling fee	8.00% 3.00%														
5ross Sale of Asset №us Cash @ Bank			58,716,158 2,371,098		85,865,938	111,000,314	129,780,854	133,195,657	136,909,952	141,017,251	145,247,768	149,605,201	154,093,357	158,716,158	
ess Senior Debt ess Equity eilling Costs			70,491,302 35,000,000 4,761,485		70,491,302 65,000,000 2,575,978	70,491,302 65,000,000 3,330,009	70,491,302 65,000,000 3,893,426	70,491,302 65,000,000 3,995,870	70,491,302 65,000,000 4,107,299	70,491,302 65,000,000 4,230,518	70,491,302 65,000,000 4,357,433	70,491,302 65,000,000 4,488,156	70,491,302 65,000,000 4,622,801	70,491,302 65,000,000 4,761,485	
otal Costs		·	40,252,787		138,067,281	138,821,312	139,384,728	139,487,172	139,598,601	139,721,820	139,848,735	139,979,458	140,114,103	140,252,787	
Fotal Profit Upon Sale			20,834,469		(52,201,343)	(27,820,998)	(9,603,874)	(6,291,515)	(2,688,649)	1,295,431	6,399,033	9,625,743	13,979,254	18,463,371	
Profit Split nvestor return from Sale Total Investor Return			%0		(1,002,399)	1,008,351	2,510,795	2,783,979	3,081,122	3,409,706	3,748,148	4,096,742	4,455,795	4,825,619	
Sash Balance to REIT			100%		(52,201,343)	(27,820,998)	(9,603,874)	(6,291,515)	(2,688,649)	1,295,431	5,399,033	9,625,743	13,979,254	18,463,371	
roject ROI - Annulised					0%	9%0	9%0	9%0	0%	1%	4%	7%	10%	14%	
riterest Cover Ratio					1.18	1.54	1.81	1.85	1.91	1.97	2.03	2.09	2.15	2.22	

# ANNEXURE C (CONTINUED)

iona International International International International International International International International															
Summary Analysis					Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Auto Const Auto Const Development Cents Development Cents Envelopment Cents Function Const Marketing Const Autor Canadiament Per Parte Repet Start Super Start Super Start Super Start Super Start Super Start Super Start Super Start	als [14794234 [2097,980 5] 1477424 224 234 234 234 234 234 234 234 234	aut Page 2,087,980 14,784,224 3,3710,064 5,312,865 4,000,000 42,525,000 5	¢	99999999999999999999999999999999999999	0.cc 17 2.097.990 14.784.224 11.47.955 3.710.604 11.47.955 4.000.000 4.000.000 42.555.000 5 42.555.000 5 71.648.367 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	90 29 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<b>4 4 2 4</b>	• • • •	<b>• •</b> • • •	ο ο ο ο ο  α	ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο	• • • •		R
Lund Payments 25,000,000 35	te 01-Feb-17 01-Feb-17 01-Feb-17 01-Feb-17			w w	25,000,000 -										
Total Land payments 5 Total Capital Coasts 5 TPC Cumulative	25,000,000 96,648,367	70ti \$	al Less Equity ShortFal 96,648,367	Total	25,000,000 \$ 96,648,367 \$ 96,648,367 \$	- \$ 96,648,367 \$	- \$ 96,648,367 \$	- \$ 96,648,367 \$	- \$ - \$ 96,648,367 \$	- \$ 96,648,367 \$	- \$ - \$ 96,648,367 \$	- \$ - \$ 96,648,367 \$	- \$ - \$ 96,648,367 \$	- 96,648,367	
Debi Required Recursions Debit Recursions et Debit Commander et Debit Actual Recursion Commissione Ethol	67% 67%	ю ю	31,648,367 65,000,000	96,648,367 32.7% \$ 67.3% \$ 67.3% \$ - \$	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 68,812,320 \$ 5 \$	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 66,801,570 \$	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 65,299,126 \$ 5	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 65,025,942 \$ 5	31,648,367 \$ 31,648,367 \$ 66,000,000 \$ 65,000,000 \$ 5 \$	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 65,000,000 \$ 65,000,000 \$	31,648,367 31,648,367 65,000,000 65,000,000 65,000,000 5 65,000,000 5 65,000,000 5 6 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8 5 8	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 65,000,000 \$	31,648,367 \$ 31,648,367 \$ 65,000,000 \$ 65,000,000 \$ 65,000,000 \$	31,648,367 31,648,367 65,000,000 65,000,000 65,000,000	
Does Pronumed Equity Required Programy Level Catali Flows Resort Operating Profit	\$m2	a2	Income	Growth 100.0%											
EBITDA Essette constant de la					6,869,275	8,880,025	10,382,468	10,655,653	10,952,796	11,281,380	11,619,821	11,968,416	12,327,469	12,697,293	
agang anoniam controvaco FF&E Reserve Lease				(200'000)	(200'000)	(200,000)	(200,000)	(200,000)	(200.000)	(200,000)	(200'000)	(200,000)	(200,000)	(200,000) \$	
Operating Income	s				6,669,275	8,680,025	10,182,468	10,455,653	10,752,796	11,081,380	11,419,821	11,768,416	12,127,469	12,497,293	
Interest Senior Debt Interest Samine Debt Interest Mazzanine Debt	31,648,367 65.000.000	8.00%			(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	(2,531,869)	
Tatai Interest OPPEX Building Management Fee Furds Management Fee		1.50%	25,318,693 (14,497,255)		<mark>(2,531,869)</mark> (1,449,725)	(2.531,869) - (1,449,725)	(2.531,869) - (1,449,725)	(2.531,869) - (1,449,725)	(2.531,869) - (1,449,725)	(2.531,869) - (1.449,725)	(2.531,869) - (1.449,725)	(2.531,869) - (1,449,725)	(2,531,869) - (1,449,725)	(2.531,869) - (1,449,725)	
Project Cash Flow Before distribution Project Cash Flow Before Distributionn - Cumulative			65,818,648		2,687,680 2,687,680	4,698,430 7,386,110	6,200,874 13,586,984	6,474,058 20,061,042	6,771,201 26,832,243	7,099,785 33,932,028	7,438,227 41,370,255	7,786,821 49,157,076	8,145,874 57,302,950	8, 515, 698 65, 818, 648	
Return On Equity (ROI) Return On Equity (ROI) - Cumulative			Hindle		4% 4%	7% 11%	10% 21%	10% 31%	10% 41%	11% 52%	11% 64%	12% 76%	13% 88%	13% 101%	
Investor Profened Return Investor Year Investor Yacar Investor Stortfall	*	65,000,000	10.00% \$	65,000,000 59,061,042 5,938,958	6,500,000 2,687,680 4,13% (3,812,320) (3,812,320)	6,500,000 4,698,430 7,23% (1,801,570) (5,613,830)	6,500,200 6,200,814 9,54% (299,126) (5,913,016)	6, 500, 000 6, 474, 058 9, 96% (25, 942) (5, 938, 958)	6,500,000 6,500,000 10,00%	6,500,000 6,500,000 10,00%	6,500,000 6,500,000 10.00% -	6,500,000 6,500,000 10,00% -	6, 500,000 6, 500,000 10.00% -	6,500,000 6,500,000 10,00% -	5,938,958
Net Cash Flow		\$	6,757,605.96		.	.	.	.	271,201	599,785	938,227	1,286,821	1,645,874	2,015,698	
Equity Shortfall (to maintain distribution)															
Cash Balance Requirement Cash Rate Selimp fee	8.00% 3.00%		1,691,346												
Gross Sale of Asset Plus Cash @ Bank			158,716,158 1,691,346		85,865,938	111,000,314	129,780,854	133, 195,657	136,909,952	141,017,251	145,247,768	149,605,201	154,093,357	158,716,158	
Less Sanior Debt Lass Equity Seling Costs Total Costs			31,648,367 65,000,000 4,761,485 101,409,851		31,648,367 66,000,000 2,575,978 <u>99,224,345</u>	31,648,367 65,000,000 3,330,009 <u>99,978,376</u>	31,648,367 65,000,000 3,893,426 100,541,792	31,648,367 65,000,000 3,995,870 100,644,236	31,648,367 65,000,000 4,107,299 100,755,665	31,648,367 65,000,000 4,230,518 100,878,884	31,648,367 65,000,000 4,357,433 101,005,800	31,648,367 65,000,000 4,488,156 101,136,523	31,648,367 65,000,000 4,622,801 101,271,167	31,648,367 65,000,000 4,761,485 <u>101,409,851</u>	
Total Profit Upon Sale			58,997,653		(13,358,407)	11,021,938	29,239,062	32,551,421	36,154,287	40, 138, 366	44,241,968	48,468,678	52,822,190	57,306,307	
Profit Spilt Investor return from Sale Total Investor Return			%0		- 2,687,680	- 4,698,430	6,200,874	- 6,474,058	6,500,000	6,500,000	6,500,000	6,500,000	6,500,000	6,500,000	
Cash Balance to REIT			100%		(13,358,407)	11,021,938	29,239,062	32,551,421	36,425,488	40,738,152	45,180,195	49,755,500	54,468,064	59,322,004	
Project ROI - Annulised					0%	11%	30%	34%	37%	42%	46%	50%	55%	59%	
Interest Cover Rasio					2.63	3.43	4.02	4.13	4.25	4.38	4.51	4.65	4.73	4.94	

# ANNEXURE D

Specific brands and examples of modular competition in Australia.

The Modular Building Industry Association Australia is the key body for those in the industry. Their website lists members and promotes the benefits of modular for both residential and commercial purposes.

http://www.mbiaa.com.au/

Tektum is an Australian operation building modular homes with a genuine architectural edge. Their website give you a glimpse at the possibilities a little forward thinking can inspire:

http://www.tektum.com.au/fast-facts.html

### **ANNEXURE E**

Modular construction has been used on a broad range of projects. Here are some examples:

- The Macarthur Gardens project developed by BlueCHP includes 101 units (56 affordable rental housing units and 45 units for sale). The project was built using cross laminated timber, the first time this material had been used in a medium density development in NSW. The Macarthur Gardens project received a commendation at the UDIA awards in the Excellence in Affordable Development category.
- Hickory Building Group completed, in December 2016, La Trobe Tower, a residential tower spanning 44 levels in central Melbourne. It is understood to be Australia's tallest prefabricated building. Hickory claims the project was delivered up to 30% faster than conventional construction methods. The large prefabricated units were installed in the evening when trams ceased operation on the street.
- Hickory also used their prefabricated building system to construct the 77 unit Adara Apartments (Stella B17) in Perth, a mix of one and two bedroom affordable housing units over 6 levels. The 96 modules comprising the complex were installed in 10 days. This project was supported by Commonwealth and State contributions
- J Hutchinson Builders constructed 153 units of modular student accommodation for ANU in 2010 the ANU Lazarus Wing - using prefab housing modules. The building represents a mix of studio and one bedroom units. The modules were delivered over 16 lifting days, at the rate of 18 modules per day (delivered and installed). Total construction time was 9 months

It should be noted that not all OSMH lends itself to being moved, and that a number of these high-rise projects and the systems they employ may be unsuitable for meanwhile use. Meanwhile use housing is thought to be more likely to work with low to medium rise apartment blocks.

Perhaps the most significant example of engineers, architects and builders stepping into this bold new world of construction is 461 Dean Street in Brooklyn which is the tallest modular building in world. They used a post-tensioning system to interlock the modules, so whilst spectacular in design, it cannot easily be deconstructed like the Modulation<sup>™</sup> System.



