

SUNWAY[®]

CONSTRUCTION

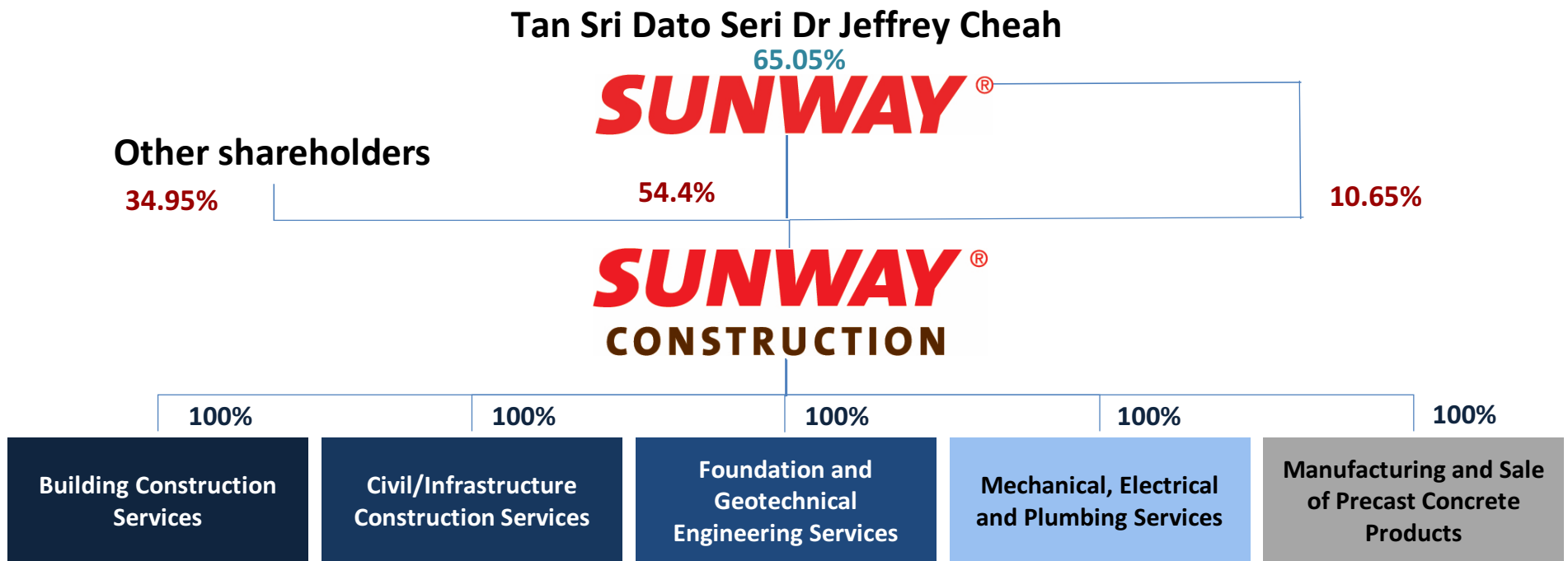


Corporate Presentation

Sept 2019

CORPORATE PROFILE

- Incorporated in 1976 & commenced business in 1981
- First listing in year 1997 & delisted in year 2004
- Relisting under the construction sector of the Main Market of Bursa Malaysia on 28th July 2015
- Cumulative revenue since inception of RM27 bil
- Market capitalization: Around RM2.7bil (Sept 2019 : 3.2% Foreigner; 46.1% Bumi and 50.7% Non Bumi)
- Top external shareholders (EPF 8.3%, Amanah Saham 6.8%, Great Eastern, AIA, Kumpulan Wang Persara)



FULLY INTEGRATED BUSINESS MODEL

Building Construction Services



- Design and construction service provider in the residential, commercial, institutional and specialty projects
- International portfolio includes several large building construction services projects in Singapore, UAE and Trinidad and Tobago
- Special Purpose Building Projects include Kuala Lumpur Convention Centre, Pinewood Studio, Sunway Medical Centre, Monash University Campus Malaysia; Sunway Shopping Mall

Civil/Infrastructure Construction Services



- Major provider of civil/infrastructure construction services and have participated in various roads, highways, airports, bridges and rail transportation infrastructure projects over the last 30 years
- Local Projects include Ipoh Airport, SILK, Maju Expressway, SKVE and special rail transportation infrastructure like MRT, LRT and BRT
- Overseas Projects include 7 highways and bridges in India

Foundation and Geotechnical Engineering Services



- Core services include piling solutions and earth retaining systems
- Services cover all types of buildings such as residential, commercial, institutional, purpose-built or specialty buildings, and civil/infrastructure construction projects.

Mechanical, Electrical and Plumbing Services



- Main services are categorised into mechanical, electrical, plumbing and specialised engineering solutions
- Services offered to both internal and external clients as part of integrated services and on stand alone basis

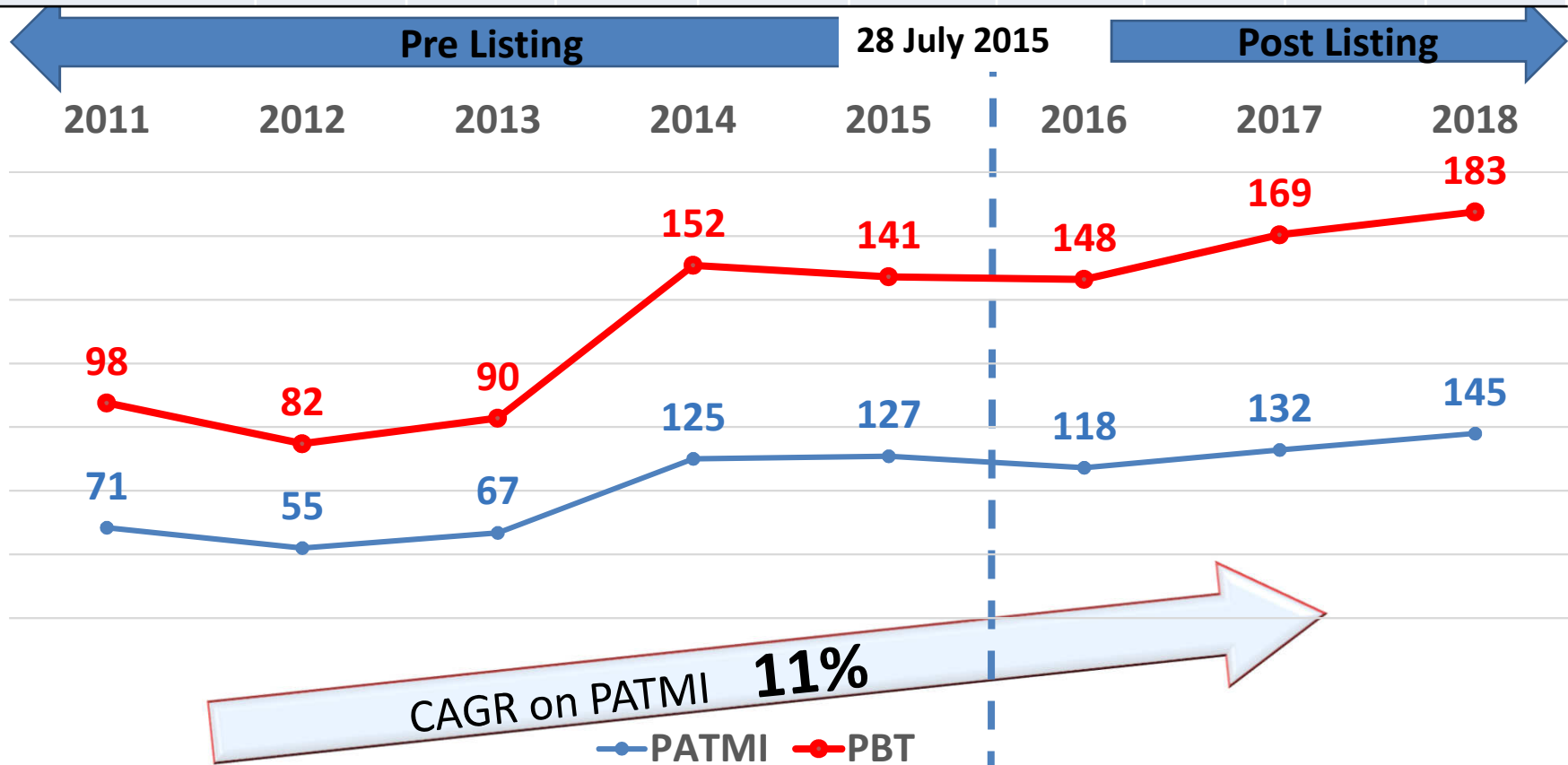
Manufacturing and Sale of Precast Concrete Products



- Develops, designs, manufactures and supplies precast concrete products with manufacturing plants located in Iskandar and Senai, Johor, Malaysia
- Precast concrete products manufactured, include Industrialised Building System (“IBS”) components, for residential, commercial and infrastructure development projects.

PROVEN TRACK RECORD

| | IPO (28.7.15) | 29.12.17 | 30.3.18 | 30.6.18 Post GE14 | 28.9.18 | 31.12.18 | 29.3.19 | 28.6.19 | 30.9.19 |
|-----------------------|------------------|----------|---------|----------------------|---------|----------|---------|---------|---------|
| Price (RM) | 1.20 | 2.51 | 2.06 | 1.81 | 1.82 | 1.33 | 1.91 | 2.01 | 2.05 |
| Market Capitalisation | 1.55b | >3.0 b | 2.66b | 2.34b | 2.35b | 1.72b | 2.47b | 2.6b | 2.7b |



2011 to 2014 figures as per prospectus and circular AND 2016 to 2017 have been restated for MFRS 9

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STRONG FINANCIAL PERFORMANCE

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 1Q 19 | 2Q 19 | 3Q 19 |
|-----------------|----------|----------|---------|----------|----------|----------|-----------|-----------|-----------|
| | Audited* | Audited* | Audited | Restated | Restated | Restated | Unaudited | Unaudited | Unaudited |
| | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil |
| Revenue | 1,839.6 | 1,880.7 | 1,916.9 | 1,788.8 | 2,076.3 | 2,256.8 | 440.0 | 440.2 | 402.6 |
| EBITDA | 130.6 | 192.2 | 178.2 | 182.6 | 196.9 | 222.6 | 48.3 | 53.9 | 45.6 |
| PBT | 89.8 | 152.3 | 140.8 | 148.0 | 168.7 | 182.7 | 40.1 | 41.2 | 35.6 |
| PBT % | 4.9% | 8.1% | 7.3% | 8.3% | 8.1% | 8.1% | 9.2% | 9.4% | 8.8% |
| PBT % - Con | 2.5% | 3.2% | 3.8% | 6.0% | 7.3% | 8.6% | 9.9% | 10.2% | 9.7% |
| PBT % - Precast | 21.6% | 39.1% | 30.4% | 20.3% | 19.0% | 0.8% | 0.3% | 0.2% | 0.5% |
| PATMI | 66.9 | 124.8 | 127.2 | 117.8 | 132.3 | 144.7 | 31.0 | 33.2 | 33.5 |
| ROE (%) | 11.0% | 16% | 31% | 26% | 26% | 26% | 20% | 21% | 24% |

Management's commitment is 35% of full year PATMI

Dividend for 2015 : 4 cents or > 40% of full year PATMI

Dividend for 2016 : 5 cents or > 55% of full year restated PATMI

Dividend for 2017 : 7 cents or > 68% of full year restated PATMI

Dividend for 2018 : 7 cents or > 62% of full year PATMI

SOUND BALANCE SHEET

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 1Q 19 | 2Q 19 | 3Q 19 |
|----------------------------|----------|------------|-------------|-------------|--------------|-------------|--------------|--------------|-------------|
| | Audited* | Audited* | Audited | Restated | Restated | Restated | Unaudited | Unaudited | Unaudited |
| | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil | RM mil |
| Shareholders' Fund | 609.7 | 328.3 | 451.7 | 488.5 | 544.0 | 591.7 | 620.8 | 603.3 | 591.9 |
| Total assets | 1,441.9 | 1,272.2 | 1,397.4 | 1,475.8 | 1,810.2 | 1,768.0 | 1,841.9 | 1,996.6 | 1,812.6 |
| Bank borrowings | 90.5 | 135.2 | 136.8 | 136.5 | 134.7 | 113.6 | 174.8 | 213.9 | 223.3 |
| <i>In-house advance</i> | | <i>1.1</i> | <i>21.9</i> | <i>56.9</i> | <i>131.5</i> | <i>96.3</i> | <i>115.2</i> | <i>151.8</i> | <i>86.4</i> |
| Cash + Placement | 156.1 | 291.6 | 468.5 | 465.8 | 487.2 | 484.9 | 579.5 | 623.8 | 523.2 |
| Net Gearing Ratio(times)** | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A |

Note : To be read in conjunction with our Combined Audited Accounts.

**As per prospectus*

***Net Gearing Ratio = Net debt / Shareholders' Funds*

NON FINANCIAL INDICATORS

| | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------|------------|------------|------------|------------|------------|
| <u>Quality</u> | | | | | |
| QLASSIC-construction | 79% | 75.3% | 73.3% | 77.2% | 73.6% |
| CONQUAS-precast | 100% | 100% | 100% | 100% | 99.2% |
| Customer Satisfaction | 75.6% | 76.5% | 74.3% | 75.7% | 77.6% |
| <u>ESH</u> | | | | | |
| Work Man-Hours | 16,376,137 | 14,676,640 | 16,918,924 | 18,790,437 | 20,242,286 |
| Fatal Accident | 2 | 2 | 2 | - | - |
| Environmental Inspection | 71% | 74.44% | 80.41% | 83.6% | 84.5% |
| FTSE4Good Inclusion | ✓ | ✓ | ✓ | ✓ | ✓ |
| <u>Employees</u> | | | | | |
| % Woman | 15% | 16% | 15% | 23% | 27% |
| Ratio Men: Women pay | 0.97:1 | 0.97:1 | 0.98:1 | 0.97:1 | 0.96:1 |
| Man day training/employee | 3.23 | 3.6 | 2.7 | 1.2 | 2.8 |
| Attrition | 17% | 14% | 13% | 13% | 13% |

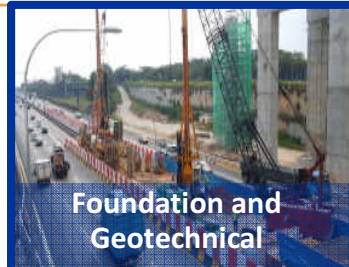
INVESTMENT HIGHLIGHTS



1

FULLY INTEGRATED COMPANY

A Turnkey Contractor with a Full Range of Integrated Services & Products



Range of Services Supported by Building Information Modelling, Large Asset Base & Best Practices

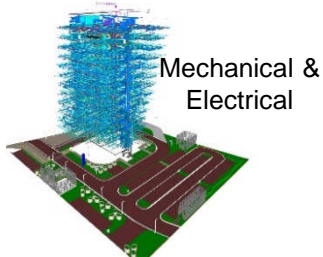
Building Information Modelling = Improved visualization for clash analysis

Large Asset Base Allows Us to Maximize Economies of Scale

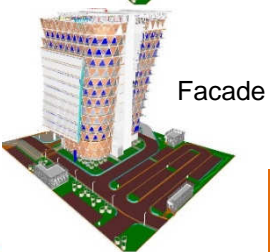
Maximizing Cost Savings and Improved Operating Efficiencies = Enhanced Profitability



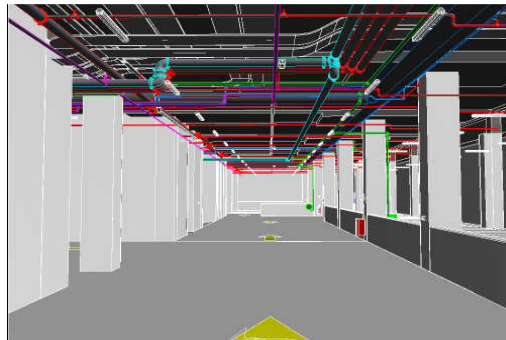
Civil & Structural



Mechanical & Electrical



Facade



- 33 Boring Rigs
- 19 Tower Cranes
- 5 Launching Girders
- 13 Crawler Cranes
- 17 Mobile Cranes
- 5 Passenger Hoist
- 27 Excavators
- 7 Skylift
- 50,000 M² System Formworks

- Quality Control
- Rationalizing Functions
- Consolidating Management Functions
- Maximise Economies of Scale

Well Positioned to Bid for and Undertake Large and Complex Projects Both Domestically & Internationally to Diversify Risk and Ensure Sustainable Development

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SOLID DIVERSIFIED ORDER BOOK

| As at Sept 2019 (RM mil) | Completion | Contract Sum | O/S Orderbook |
|------------------------------|------------|-----------------|------------------|
| Building | | | 1,273 23% |
| Putrajaya Parcel F | 1Q 2019 | 1,610 | 34 |
| PPA1M Kota Bharu | 1Q 2020 | 582 | 107 |
| Nippon Express | 4Q 2019 | 70 | 17 |
| TNB HQ Campus (Ph 2) | 2Q 2021 | 781 | 739 |
| PLC | 2Q 2021 | 310 | 307 |
| Oxley Tower (MEP) | 2Q 2022 | 68 | 68 |
| IOI Mall (MEP) | | 68 | 68 |
| Infrastructure/Piling | | | 2,165 39% |
| MRT V201 + S201 | 2Q 2021 | 1,213 | 205 |
| LRT 3 : Package GS07-08 | 2Q 2021 | 2,178 | 1,817 |
| Piling works | Various | 128 | 30 |
| Piling works - Y19 | Various | 99 | 56 |
| Sentul West Station (MEP) | 1Q 2021 | 57 | 57 |
| Internal | | | 1,792 32% |
| SMC 4 | 4Q 2019 | 512 | 401 |
| Sunway Serene | 4Q 2020 | 449 | 281 |
| Velo 2 | 4Q 2021 | 352 | 312 |
| Velocity 3C4 | 2Q 2021 | 100 | 83 |
| Sunway GEOLake | 1Q 2021 | 223 | 118 |
| Carnival Mall Ext | 4Q 2020 | 286 | 234 |
| SMC Seberang Jaya | 4Q 2020 | 180 | 154 |
| BB Solar | 4Q 2019 | 8 | 8 |
| Big Box Hotel | 3Q 2020 | 100 | 87 |
| Parcel CP2 (piling) | 3Q 2021 | 119 | 114 |
| Singapore | | | 321 5% |
| Precast | Various | 331 | 201 |
| New Order 2019 | Various | 120 | 120 |
| Grand Total | | 9,942 | 5,619 |
| | | 1,730 | 1,624 |

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NEW ORDER BOOK SECURED 2019 TO-DATE

| Projects (2019 new awards) | Client | Duration | Contract Sum (RM'mil) |
|---|---|-----------|-----------------------|
| TNB HQ Campus Development (Phase 2) | Tenaga National Berhad | 26 months | 781.3 |
| LRT 3 - GS10 piling works | SN Akmida | 12 months | 47.6 |
| LRT 3 - GS06 piling works | Rahimkon | 4 months | 12.8 |
| Transit Oriented Development - Plot 7MD7 | Putrajaya Development Sdn Bhd | 16 months | 38.8 |
| Big Box Hotel (14 floor, 288 rooms) | Sunway MarketPlace Sdn Bhd | 16 months | 99.5 |
| Kallang Whampoa C57 (Precast) | Hock Guan Cheong Builder Pte Ltd | 36 months | 29.5 |
| Punggol North C14 (Precast) | Hong Leong Building Materials Pte Ltd | 18 months | 26.6 |
| Precast -others | | | 3.8 |
| CP2 - Earthwork and pilings | Sunway SouthQuay Sdn Bhd | 20 months | 119.0 |
| Oxley mixed development in Jalan Ampang - Electrical and ELV | NSC for Oxley Rising Sdn Bhd. Main Contractor : Ssangyong Engineering & Construction Co Ltd | 35 months | 67.8 |
| Petronas Leadership Centre, Bangi | Petronas Management Training Sdn Bhd | 20 months | 310.0 |
| Grand Total till June 2019 | | | 1,536.7 |
| IOI Mall (MEP) | IOI City Mall Sdn Bhd | 18 months | 68.0 |
| Sental West Station (MEP) | MMC Gamuda kmrt (UGW) JV | 12 months | 56.6 |
| Big Box Rooftop solar | Sunway Century Sdn Bhd | 3 months | 8.0 |
| Jurong West N2C20 (Precast) | Kienta Engineering Construction Pte Ltd | 13 months | 38.6 |
| Tampines N9C18 (Precast) | Welltech Construction Pte Ltd | 15 months | 21.9 |
| Secured up to 30 Sept 2019 | | | 1,729.7 |

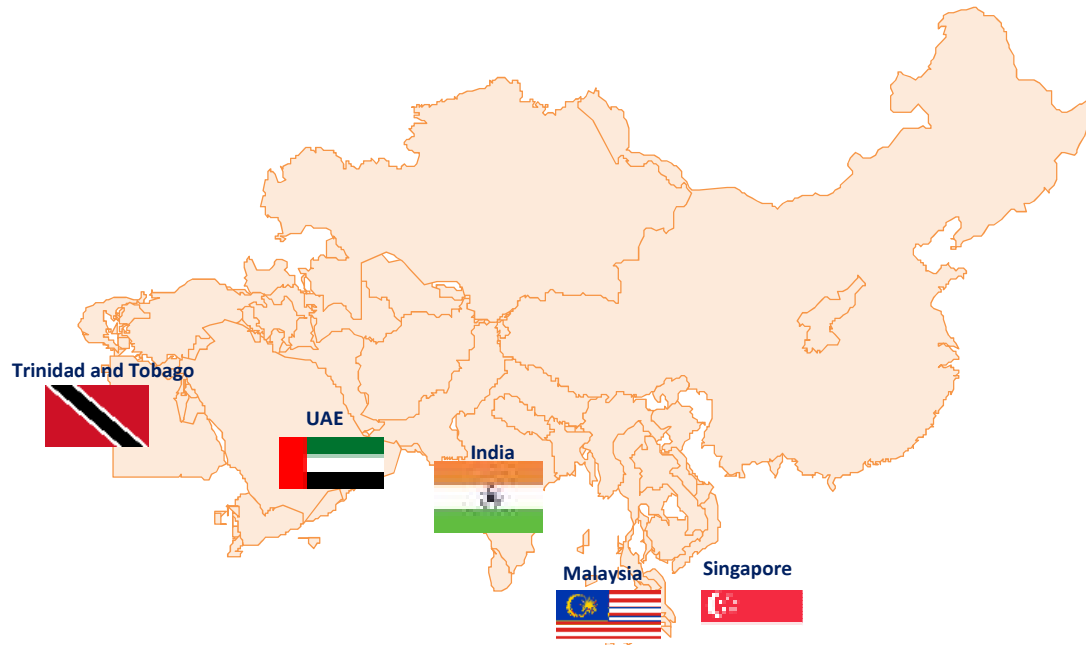
Target NEW
order book for
FYE 2019 : RM
1.5b

New order 2018 : 1.6b, **2017** : 4.0b, **2016** : 2.7b, **2015** : 2.6b, **2014** : 0.8b,
2013 : 2.9b, **2012** : 1.9b

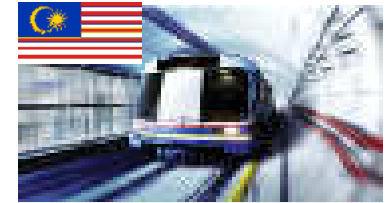
Outstanding Order book 2018 : 5.2b, **2017** : 6.1b, **2016** : 4.8b, **2015** : 3.8b, **2014** : 3.0b,
2013 : 3.2b, **2012** : 4.1b

PROVEN TRACK RECORD

Successfully Secured & Executed Major Projects both Domestically & Internationally..



Parcel F, Putrajaya
Completed : 2019
Value: RM1,610mil



Package V4
Completed : 2016
Value: RM1,172mil



**Kuala Lumpur
Convention Centre**
Completed: 2005
Value: RM549mil



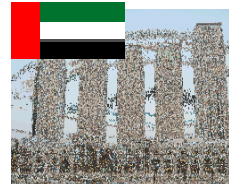
**Phase 1A,
Rihan Heights,UAE**
Completed: 2010
Value: US\$510 mil



**East-West Corridor
Uttar Pradesh, India**
Completed: 2008
Value: US\$67 mil



**Ministry of Legal
Affairs**
Completed: 2007
Value: US\$58 mil



**Phase 1, Plot 1
Al-Reem Island**
Completed: 2009
Value: US\$362 mil



HDB – Bukit Merah
Completed: 2016
Value: SGD31mil



LRT Package B
Completed : 2015
Value: RM569mil

STRONG BRAND HERITAGE

Proven Capabilities...

Which Led to an Established Multi-Award Winning Brand...

Proven
Operating
Success

SUNWAY[®]
CONSTRUCTION

Excellent
Reputation

Heritage of Over 30
years

Leverage on the "Sunway" Brand

2019

- **6 March 2019: 4th Asia Sustainability Reporting Awards (ASRA) Singapore** – Asia's Best Sustainability Report within Annual Report
- **31 July 2019 : MSWG Corporate Governance Awards** – Overall CG & Performance (Silver / 2nd placing) and CG Disclosure (Top 15)
- **1 Aug 2019 : MSOSH OSH Awards 2019** commendable safety and health record (1 Gold Class 1, 4 Gold Class 2 & 1 Silver)
- **18 Sept 2019 : The Edge Billion Ringgit award** – Highest ROE
- **4 Oct 2019 : MCIEAW 2019 "Contractor of the Year"**

FTSE4Good Bursa Malaysia Index

Bursa Malaysia has always advocated sustainability as key to business success today. A holistic approach to business management, incorporating economic, environmental, social and governance considerations alongside financial ones, will serve as a sound business model that supports business continuity and long term value creation for stakeholders and society at large.



**SG50 Prestige
Enterprise Award
2015/2016**



**Singapore Successful
Brand 2015**



**MCIEA Builder of The
Year Award
2018, 2013, 2005 &
2003**



**MCIEA
International
Achievement Award
2012**



**Industry Excellence
Awards 2014 – Export
Excellence Award**



**MCIEA Project Award:
Building-Major Scale –
KL Convention Centre
2006**

5 CONTINUOUS SUPPORT INTERNALLY

Sunway Group Strategic Relationship

SUNWAY®

- ✓ Major property developer in Malaysia. Revenue = 2018 : 0.6b (2017, 0.9b, 2016: RM1.2b) from its property development divisions
- ✓ Total gross development value of remaining landbank (3,356 acres) Johor 50%, Klang Valley 28%, Penang 6%, Singapore 12%, Others 4% – **RM58.7 bil (15 years)**
- ✓ 2019 Launch Target **RM2b** (2018 : RM2.1b, 2017 : RM1.1b, 2016 : RM0.65b, 2015 : RM1.4 bil)
Sales target 2019 – **RM1.3b** (2018 : RM1.8b; : RM2017 : RM1.2b; 2016 : RM1.2b, 2015 : RM1.2b)
- ✓ At least 51% stake in Suncon Group post IPO

Our Key Developments with Sunway Group



Sunway Pyramid

Sunway Carnival Mall

Sunway Medical Centre

Sunway Lagoon

Ongoing Projects



Sunway Geo Suites

Sunway Serene, Kelana Jaya

Sunway Velocity Hospital

Emerald Residence

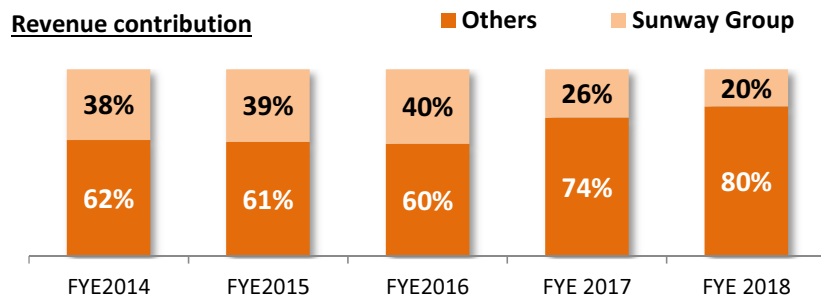


SUNWAY®
CONSTRUCTION

- ✓ Competitive advantage in property development – design optimization, assurance on quality & timeliness
- ✓ Portfolio of diversified services across the construction sub-sector

Sunway Group's Continued Support

Revenue contribution



- ✓ 2018 : secured RM1.2 bil worth of orders from Sunway Group (77% of new order win)
- ✓ 2017/8 : reduced reliance on in-house jobs

Symbiotic Relationship with Sunway Group Provides Stability During Periods of Downturn

HIGHLY EXPERIENCED MANAGEMENT TEAM

Chung Soo Kiong



Designation : Managing Director

Years in Suncon Group : 21 years

Construction Industry Experience : Over 20 years

Datuk Kwan Foh Kwai



Designation : Advisor

Years in Suncon Group : > 21 years

Construction Industry Experience : 40 years

Liew Kok Wing



Designation : Deputy Managing Director

Years in Suncon Group : 21 years

Construction Industry Experience : Over 20 years

Evan Cheah



Designation : Non-Independent Non-Executive Director

Years in Suncon Group : 16 years

Construction Industry Experience : Over 15 years

Ng Bee Lien



Designation : Chief Financial Officer

Years in Suncon Group : 13 years

Construction Industry Experience : 20 years

Thomas Samuel



Designation : Executive Director Sw.Geotechnics

Years in Suncon Group : Since 2015

Construction Industry Experience : Over 33 years

Richard Wong



Designation : Executive Director Building Division

Years in Suncon Group : 18 years

Construction Industry Experience : Over 28 years

Kwong Tzyy En



Designation : Executive Director Precast Division

Years in Suncon Group : 16 years

Construction Industry Experience : Over 20 years

Eric Tan Chee Hin



Designation : Executive Director MEP Division

Years in Suncon Group : 17 years

Construction Industry Experience : Over 19 years

Extensive Industry Expertise and Strong Execution Capability with an Average of Over 23 Years of Experience in the Construction Industry

KEY TAKEAWAYS

Fully integrated Construction Company

- Integrated business model providing end-to-end design and construction solutions
- VDC enabled
- Well supported by investment in capex and assets previously

Solid Order Book

- Strong order book & tender book with diversified construction capabilities across various sub – segments of the construction sector
- Proven Track Record in the Local & International Stage
- History of repeat order from reputable clients with high credit worthiness

Positioned for Growth

- The largest pure play listed construction company in Malaysia
- Top 3 construction group by turnover and profit
- Overseas venture to Myanmar and India
- M'sia Budget 2019 : RM29b budget in new hospital by JKR + Khazanah to develop 80 acres at Subang Aiport as aerospace hub + opportunities in renewable energy sector (LSS 3 : 2b)
- Construction sector growth in 2018 : 4.2%; 2017 : 6.7%; 2016 : 7.4% ; 2015 : 8.2% vs BNM forecast of 7.3% for 2018
- Singapore Precast : Construction on ICPH plant is on-going

Continuing Support from Sunway Group

- At least 51% stake in Suncon Group post IPO
- Bed rock orders even during a decline in the construction sector (past years 40% revenue)
- Treasury support from Sunway Bhd

Financial

- High Return on Equity (> 20%)
- Sound balance sheet with net cash position
- 35% dividend policy (2015 : > 40%, 2016 : > 50%, 2017 : > 60%, 2018 : > 60%)

BUILDING – KLANG VALLEY

Job Scope : 1 storey semi basement car park, 4 storey institutional building, 2 guard house, 1 surau and other including associated works and upgrading of ancillary buildings

This building is designed with a target of Platinum rating for both GBI and LEED. The Campus is designed to encourage social collaboration and enhance future learning experiences through innovative learning spaces in support of PETRONAS work culture. The form of the campus is the curved central pedestrian spine that becomes a main Infrastructure focus and links all building components, where classes and accommodation blocks are interconnected closely to create space cohesion and spaces that are physically connected via crossing pedestrian bridge, adjoining classroom, guestroom and public spaces, to allow seamless visual interaction and connectedness to all these spaces. The building measures 470 meters long and by 36 meter depth including the central spine with a total built up area of 42,074.82 sq. m (452,725 sq. feet) including the sub-basement car park.



Petronas Leadership Center, Bangi

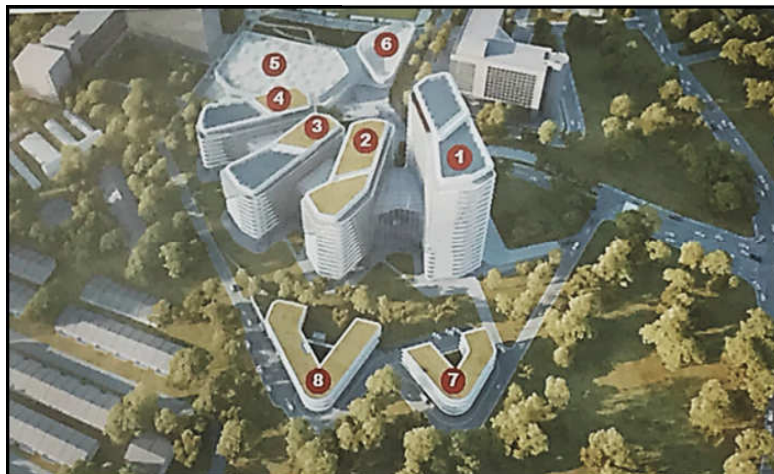
Contract Sum : RM310 mil

Client : Petronas

Completion : 1Q2021

BUILDING – KLANG VALLEY

| Building | No of Storey |
|--|--------------|
| Block A – Office | 19 |
| Block B - Office | 12 |
| Block C - Office | 9 |
| Block D- Office | 7 |
| Basement 2 | 1 |
| Basement 1 | 1 |
| LG | 1 |
| 5 - Convention Centre | 3 |
| 6 - Interactive Centre For Electricity | 2 |
| 7 - Pelitawanis | 4 |
| 8 - Child Care | 3 |



SunCon's MEP arm was awarded the MEP package (NSC) of RM95m in 2Q 2019

TNB Campus, Bangsar (26 mths, 19 Jan 2019)

Contract Sum : RM781.3 mil
(13.6 acres)

Client : Tenaga Nasional Berhad

Completion Year : 1Q2021

AERIAL VIEW

| | |
|-----------|-------------------------------------|
| 1 BLOCK A | 5 CONVENTION CENTRE |
| 2 BLOCK B | 6 INTERACTIVE CENTRE OF ELECTRICITY |
| 3 BLOCK C | 7 PELITAWANIS |
| 4 BLOCK D | 8 CHILD CARE |

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BUILDING – KLANG VALLEY

| BLOCK | DEPARTMENT |
|-------|-------------------------------------|
| F3 | Jabatan Audit Negara |
| F1 | Suruhanjaya Perkhidmatan Awam |
| F2 | Jabatan Audit Negara |
| F5 | Jabatan Perancangan Bandar dan Desa |
| F6 | Bahagian Pengurusan Hartanah |
| F7 | Jabatan Kerja Raya |
| F11 | Jabatan Perangkaan |
| F8 | <i>Shared Facilities Block</i> |
| F9 | Unit Kerjasama Awam Swasta |
| | Suruhanjaya Perkhidmatan Pelajaran |
| | Unit Kawal Selia Felda |
| F10 | Biro Pengaduan Awam |
| | Biro Tatanegara |
| | Jabatan Landskap Negara |
| | Jabatan Perangkaan |



Parcel F, Putrajaya



Contract Sum : RM1.6 bil
 (34 acres, GFA = 445,170 sqm)
Client : Putrajaya Bina Sdn Bhd
Completion Year : 1Q2019

BUILDING – SOUTHERN REGION



Citrine Hub



Afiniti Medini



Legoland Malaysia Theme Park



Legoland Water Park

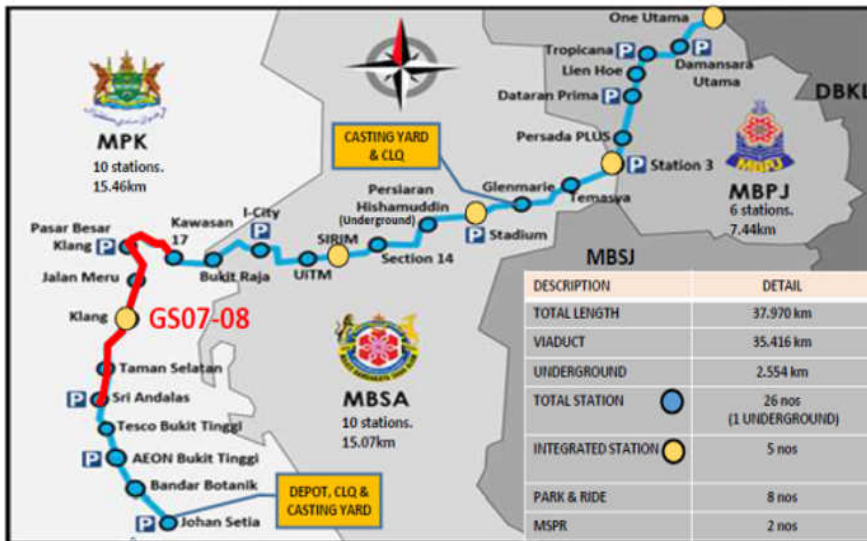
BUILDING – NORTHERN REGION



SUNWAY CARNIVAL MALL EXTENSION

CIVIL / INFRASTRUCTURE

LRT 3 - GS0708 (Kawasan 17 to Sri Andalas): RM 2.18B



Job Scope :

- 9.2km of viaduct works
- 6 stations works
- 1 “iconic” bridge over Klang River (Design & Build)
- 2 Park & Ride at Pasar Besar Klang and Sri Andalas
- 1 Centralised Labour Quarter at Johan Setia

CIVIL / INFRASTRUCTURE

MRT V201 : Sungai Buloh to Persiaran Dagang

Duration : 60 months (completion May 2021)

Job Scope : Construction and Completion of Viaduct Guideway from Sungai Buloh to Persiaran Dagang and Advance Work Construction of Viaduct Guideway between Kampung Muhibbah to Serdang Raya . Works involves **3 nos** station, **142 nos** piers, **180 km** telco fibre optic relocation, **21.5 km** underground HT cables relocation, **5.4 km** water pipe relocation and **701 nos** bored piles



GEOTECHNICAL



Pile Foundation Works



Earth Retaining System



Ground Treatment



Offshore Piling

MECHANICAL, ELECTRICAL AND PLUMBING



Gas District Cooling Plant



Pinewood Movie Studio



Central Utilities Facilities



KLIA Chilled Water

PRECAST CONCRETE PRODUCTS



Parapet Wall



Façade Window



Water Tank



Lift Core Wall



Column



Staircase



Hollow Core Slab



Prefabricated Toilet

PRECAST CONCRETE PRODUCTS

| Plant | Area (sq. ft.) | Max Annual Capacity (m ³) | Utilisation rate 2019 (%) | Utilisation rate 2018 (%) | No. of lines |
|--|--|---------------------------------------|---------------------------|---------------------------|------------------|
| Senai Plant (own) <i>Oct 2012</i> | Built up area : 262,231 Land area : 475,409 | 75,000 | 30% | 58% | 6+3 (half) lines |
| Iskandar Plant (rented) 5 years Pioneer Status | Land area : 9 hectares | 81,600 | 57% | 39% | 9 lines |

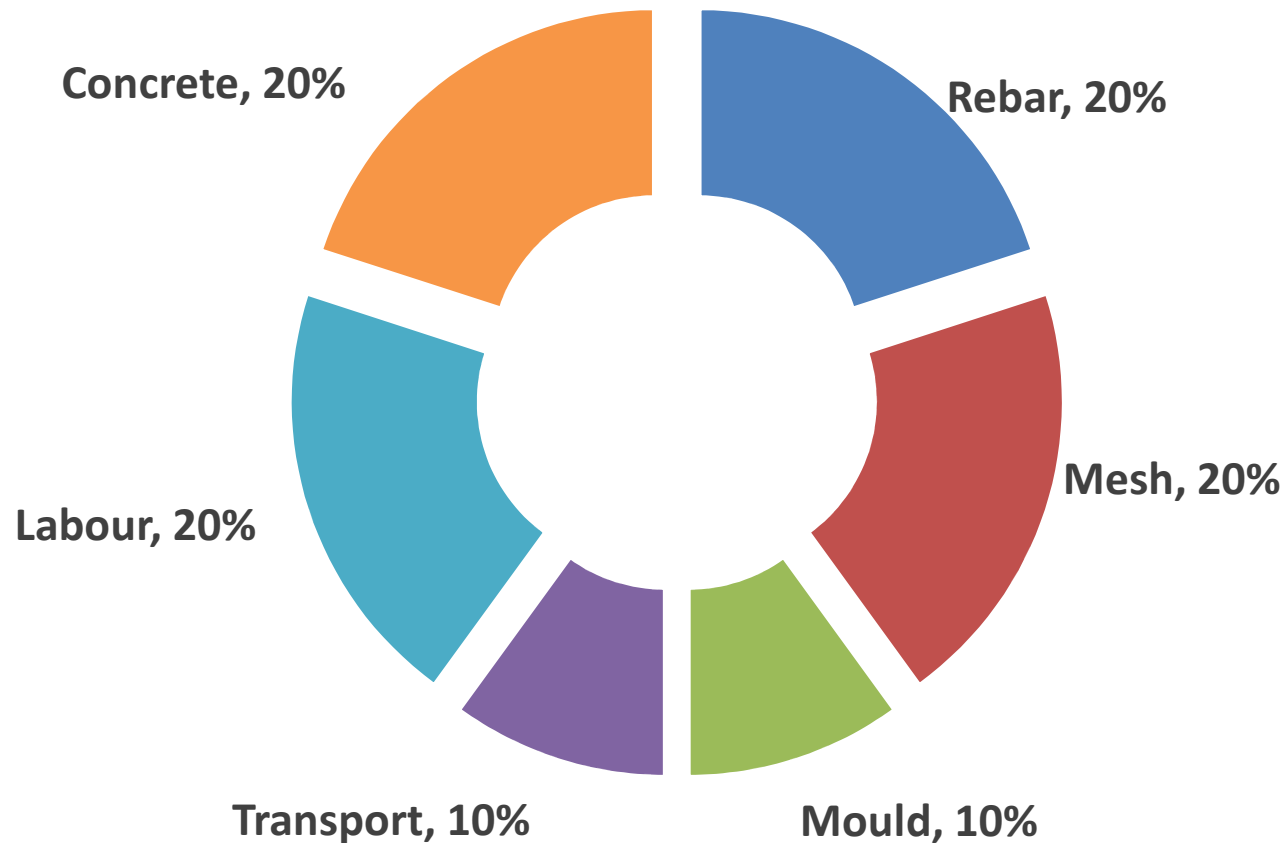
HDB BTO Launch → 2018 = 15,811 nos wit 2019(F) = 15,000 nos (2017 : 17,593; 2016 17,891; 2015 : 15,100 ; 2014 : 22,455)

Capacity building → ICPH (Integrated Construction Precast Hub) in **Pulau Punggol Barat** costing SGD80m during the 3 years construction period for a 30 years lease for a fully automated robotic precast plant
(Tender won on 27 July 2018 & tentative opening of plant : 4Q 2021)

Opportunities → HDB will implement prefabricated bathroom units (PBU) for all Singapore new flats by 2019.

PRECAST CONCRETE PRODUCTS

Cost component of Precast



PRECAST – OPPORTUNITIES IN SINGAPORE

SINGAPORE: By 2019, 35 per cent of newly launched housing board projects will be built using a method in which 3D modular units are manufactured and finished in factories, announced the Housing and Developing Board (HDB) in a news release on Wednesday (Sep 6).

The method, known as Prefabricated Prefinished Volumetric Construction (PPVC), is being piloted in Valley Spring @ Yishun. Construction for the 824 Build-to-Order (BTO) units began in March, and HDB said such technology will improve productivity and ensure greater quality control.

“Volumetric construction in a factory environment offers more uniform and better quality workmanship. The incidence of wet construction joints is also reduced, thereby improving the water tightness of wet areas,” said HDB.

It added that with the finishes done in factories, there will be less noise and dust at the construction site. Fewer workers are also required on-site.

Apart from the PPVC method, HDB also announced that by 2019, all BTO flats will be fitted with bathroom units that are pre-assembled off-site, with finishes like copper piping, partial tiling, window frames and a waterproofing system.

The PPVC method will be 8 per cent costlier than conventional building methods, where workers hoist raw materials onto elevated blocks being built.

"These costs are expected to come down as the technology matures and the industry capacities and capabilities build up over time.

"The use of pre-fabricated bathroom units and PPVC methods will also translate to savings in terms of manpower," said the HDB.



LIFTING
CRANE

TRAILER
DELIVERY

PRECAST – OPPORTUNITIES IN SINGAPORE

THE BUSINESS TIMES

REAL ESTATE

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HOME REAL ESTATE

Prefabricated bathrooms, units for all Singapore new flats by 2019



1/50, SEP 28, 2017 - 8:08 PM

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This would drive HDB's construction productivity on a larger scale, setting it on track to achieve a productivity improvement of 25 per cent by 2020, compared with 2010. PHOTO:HDB

THE Housing Development Board (HDB) says it will improve construction productivity through a greater use of prefabricated units that are assembled off-site but that can be installed on-site.

This would drive HDB's construction productivity on a larger scale, setting it on track to achieve a productivity improvement of 25 per cent by 2020, compared with 2010.

One of the initiatives is to expand the use of prefabricated bathroom units (PBU).

The HDB on Wednesday said that it would implement PBUs in 60 per cent of the flats launched in 2017, before extending this to all projects launched by 2019.

HDB construction productivity to improve 25 per cent by 2020

HDB to use prefabricated building methods in 35% of all its projects by 2019



Linette Heng

Reporter

Sep 07, 2017 06:00 am

0 Shares

Prefabricated bathrooms units (PBUs) of better workmanship quality will be a feature of all newly launched Housing Board flats by 2019.

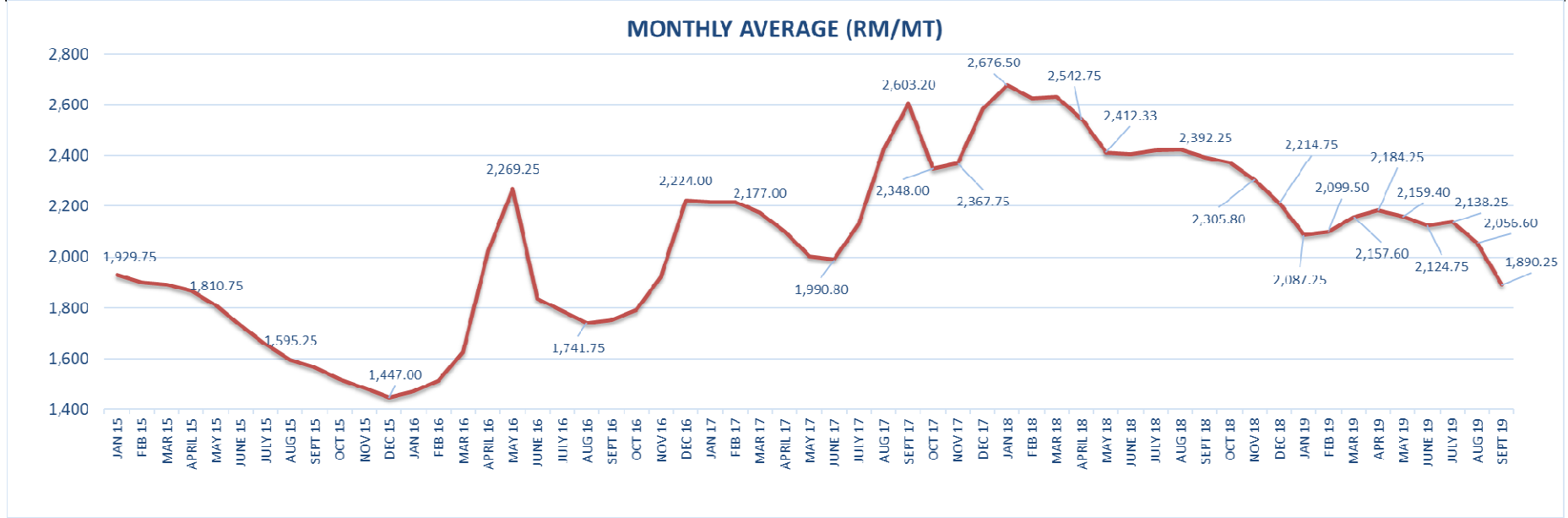
The Prefabricated Prefinished Volumetric Construction (PPVC) method - which involves constructing and assembling 3D modular units with finishes in a factory before it is transported to a construction site for installation - will also be used in 35 per cent of all HDB projects by that time.



Prefabricated bathrooms units are assembled with finishes in a factory before it is transported to a construction site for installation. PHOTO: LIANHE ZAOBAO

POTENTIAL KEY RISKS

| Potential Risk | Potential Impact | Controls to Mitigate Risk |
|---|---|---|
| Fluctuation of material price – steel rebar | Steel bar price Dec 2017: RM 2,583/mt Jun 2019: RM 2,125/mt | <ul style="list-style-type: none"> Bulk locked-in steel rebar in advanced at lower prices or when price is favorable. Forward-looking steel rebar requirement (approximately 6 months in advanced). |
| Foreign workers levy | RM 1,850p.a. for 600 direct workers. Cost impact: RM1.1mil | <ul style="list-style-type: none"> Manage foreign workers efficiently as the cost on existing direct workers (600pax) are fixed. Levy cost will be factored in in new tender. |
| Foreign currency fluctuation | Importation of special lightings, furnishing & façade components | <ul style="list-style-type: none"> FOREX hedging in advance once design and bill of quantity is confirmed. FOREX rates are fixed upfront at the contractual level. |



THANK YOU – ON-GOING PROJECTS

TNB Campus



Sunway GeoLake



Sunway Serene



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