

CHINA AND HONG KONG

QUARTERLY CONSTRUCTION COST REVIEW



CONTENTS

| | |
|---|---------|
| CHINA AND HONG KONG MARKET OVERVIEW..... | 3 |
| MARKET ANALYSIS..... | 4 |
| APPROXIMATE BUILDING COSTS - HONG KONG..... | 5 |
| BUILDING & BUILDING SERVICES PRICE INDEX - MAINLAND CHINA | 6 |
| TENDER PRICE INDEX - HONG KONG..... | 7 |
| MATERIALS - MAINLAND CHINA | 8 |
| LABOUR..... | 9 |
| GROSS VALUE OF CONSTRUCTION WORK PERFORMED - MAINLAND CHINA.... | 10 |
| GROSS VALUE OF CONSTRUCTION WORK PERFORMED - HONG KONG..... | 11 |
| APPROXIMATE BUILDING COSTS FOR MAJOR CITIES - ASIA..... | 12 - 15 |

Statistical data is compiled from sources deemed reliable but accuracy is not guaranteed. The information contained herein should be regarded as indicative and for general guidance only. Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omission, however caused. All rights reserved. Reproduction of this data, in whole or in part, is permitted providing the source is quoted.

CHINA AND HONG KONG MARKET OVERVIEW



MARKET OVERVIEW

Modular Integrated Construction (MiC) has always been considered as a way out to help improve the productivity of construction industry. Despite the continuous promotion of MiC by the government including the launching of several pilot projects, the adoption rate of this innovative construction method by the local construction industry is still low.

With the view to boost its adoption, the Buildings Department has recently issued a Practice Note for Authorized Persons (PNAP) to promulgate the gross floor area (GFA) concession for new buildings adopting MiC, which is a step forward in solving the productivity challenge faced by the construction industry. According to the said PNAP, 6% of the floor area constructed by MiC will be exempted from the GFA calculation of a development.

Despite the initiative by the government, the use of MiC in Hong Kong is still going through the learning curve and its effect on construction productivity is yet to be prominent in near future.

MARKET MOVEMENT



ECONOMY

| Indicator | Q2/17 - Q2/18 | Q1/18 - Q1/19 | Q2/18 - Q2/19 |
|--------------------------------|---------------------------|---------------------------|---------------------------|
| GDP Growth per annum | Q2/17 - Q2/18 (+) 3.6% | Q1/18 - Q1/19 (+) 0.6% | Q2/18 - Q2/19 (+) 0.6% |
| Inflation Rate (CPI) per annum | Jun 17 - 18 (+) 2.4% | Mar 18 - 19 (+) 2.1% | Jun 18 - 19 (+) 3.3% |



SUPPLY & DEMAND

| Indicator | Q1/18 | Q4/18 | Q1/19 |
|--|------------------------|------------------------|------------------------|
| Activity Level (Gross output; new + A&A) | Q1/18 HK\$64.322 Bn | Q4/18 HK\$65.598 Bn | Q1/19 HK\$56.942 Bn |



BASIC COSTS

| Indicator | Jan - Mar 18 | Oct - Dec 18 | Jan - Mar 19 |
|-------------------------|-----------------------|--------------------------|-----------------------|
| Highways Material Index | Jan - Mar 18 822.6 | Oct - Dec 18 861.0 | Jan - Mar 19 853.4 |
| Labour Wages Index | Feb - Apr 18 148.5 | Nov 18 - Jan 19 148.7 | Feb - Apr 19 148.5 |



CONSTRUCTION COST TREND

| Indicator | Q2/18 | Q1/19 | Q2/19 |
|------------------------------|---------------|---------------|---------------|
| Tender Price Index (Arcadis) | Q2/18 1910 | Q1/19 1848 | Q2/19 1835 |



1 MARKET ANALYSIS

CHINA

GROSS VALUE OF CONSTRUCTION

Gross Value of Construction Work Performed in Mainland China in the first half year has been increased by (+) 7.2% year-on-year. The sales of commercial buildings amounted had an increase of (+) 5.6% YoY. Both of the above two rates of growth are lower than those of the same period in 2018 (according to National Bureau of Statistics (NBS)). The growth of real estate and construction markets are still slowing down.

In addition, the land sales area drops (-) 27.5% YoY in the first 6 months of this year, which may lead to the construction work performed value decrease in the future.

China government released the VAT adjustment announcement in 21st March 2019 and executed upon 1st April 2019, the VAT reduced from 10% to 9% in construction works and reduced from 16% to 13% in materials or products purchase like steel, rebar and equipment etc. It is the second time of VAT reduction since April 2018 which is expected to support on the economic growth. Meanwhile, G20 summit in June 2019 released some positive signals on resuming the trading negotiation between USA and China.

COST OF MATERIALS AND LABOUR

Major construction material prices raised up 2~3% in Q2 2019. Labour wage has also been increased by 4.3% YoY. However, due to the slow growth of construction market and under the influence of VAT adjustment, the market tender prices drop slightly.

HONG KONG

DECELERATED ECONOMIC GROWTH

The Hong Kong's economy showed a significant decline in Gross Domestic Product (GDP) growth since Q1 2018 according to data released by Census and Statistics Department. It further dropped to 0.6% in Q1 2019, which is the lowest growth rate in nearly a decade. The growth rate remains 0.6% in Q2 2019 due to the continuing tension of the US-China trade war and weakened consumer demand.

SUPPRESSED CONSTRUCTION ACTIVITIES

The gross value of construction works performed declined by 13.2% QoQ and 11.5% YoY based on Q1 2019. This market movement was due to significant drop in both public and private sector output, (-)25.1% YoY and (-)16.9% YoY respectively. The private sector floor area commenced has decreased by 47% in the past year based on Q1 2019. The private sector floor area consented has also seen a decrease by 28% in the past year based on Q1 2019. The construction activities in private sector are expected to remain pessimistic.

The public-sector situation is just as discouraging, with the adjournment of meetings of Public Works Subcommittee (PWSC) since July 2019, the funding approval process for capital works has been hindered, resulting in suppressed construction activities in public sector.

For Tender Price Index (TPI), it has seen a (-)0.7% QoQ; (-)3.93% YoY. This declining trend since Q4 2016 is expected to extend throughout 2019.

COST OF MATERIALS AND LABOUR

The first quarter of 2019 showed a slight increase in price of Portland cement and concrete blocks, both increased by around 3%. Other construction materials remained stable in the previous quarter. Construction workers' wages, including concreter and painter showed little to no movement in this quarter, while wages of mechanical fitter and carpenter have increased by 4% and 3% respectively in this quarter. The labour index remains stable.



2 APPROXIMATE BUILDING COSTS

HONG KONG

Notes:

1. The cost for the respective categories given are averages based on fixed price competitive tenders. It must be understood that the actual cost of a building will depend upon the design and many other factors and may vary from the figures shown.
2. The cost per square metre are based on the Construction Floor Areas (CFA) measured to the outside face of the external walls/ external perimeter including lift shafts, stairwells, balconies, plant rooms, water tanks and the like.
3. All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site conditions. The cost, excludes site formation works, external works, land cost, professional fees, finance and legal expenses.

| BUILDING TYPE | HK\$/m ² CFA | OUTLINE SPECIFICATION |
|--|-------------------------|---|
| DOMESTIC | | |
| Apartments, high rise, public authority standard | 11,000 - 13,500 | Apartment units with fit-out, based on Hong Kong Housing Authority Non-standard Cruciform Block design |
| Apartments, high rise, average standard | 23,700 - 27,600 | Apartment units with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture |
| Apartments, high rise, high end | 31,000 - 36,200 | Apartment units with good quality fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture |
| Terraced houses, average standard | 32,200 - 37,600 | Houses with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking |
| Detached houses, high end | 47,700 up | Houses with good quality fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking |
| OFFICE / COMMERCIAL | | |
| Medium/high rise offices, average standard | 23,300 - 27,100 | RC structure, curtain wall/window wall, including public area fit-out, tenant area with screeded floor, painted wall and ceiling |
| High rise offices, prestige quality | 28,100 - 32,800 | RC structure, curtain wall, including public area fit-out, tenant area with raised floor/carpet, painted wall and false ceiling |
| Out-of-town shopping centre, average standard | 23,100 - 27,400 | Including public area fit-out and M&E, but excluding shop fit-out |
| Retail malls, high end | 30,500 - 36,400 | |
| INDUSTRIAL | | |
| Owner operated factories, low rise, light weight industry | 18,000 - 22,800 | RC structure, including small office with simple fit-out and M&E, but excluding a/c and heating |
| HOTEL | | |
| Budget hotels - 3-star, mid market | 29,800 - 32,000 | 1) Interior decoration 2) Furniture (fixed and movable) 3) Special light fittings (chandeliers, etc.) 4) Operating Supplies and Equipment (OS&E) excluded |
| Business hotels - 4/5-star | 31,200 - 36,400 | |
| Luxury hotels - 5-star | 36,400 - 42,100 | |
| OTHERS | | |
| Underground/basement car parks (<3 levels) | 25,000 - 30,000 | RC structure |
| Multi storey car parks, above ground (<4 levels) | 15,000 - 17,800 | RC structure, natural ventilation, no facade enclosure |
| Schools (primary and secondary) | 19,600 - 21,100 | Public authority standard, including fit-out, no a/c, complete with basic external works but excluding educational equipment |
| Students' residences | 22,700 - 25,700 | Including fit-out, loose furniture and a/c |
| Sports clubs, multi purpose sports/ leisure centres (dry sports) | 29,600 - 34,300 | Dry sports (no swimming pool) and are for 'leisure centre' type schemes including main sports hall, ancillary sports facilities, changing and showers, restaurant / cafe, bar, etc. Costs include a/c, Furniture, Fittings and Equipment (FF&E) |
| General hospitals - public sector | 38,200 - 42,800 | Excluding medical and operating equipment |

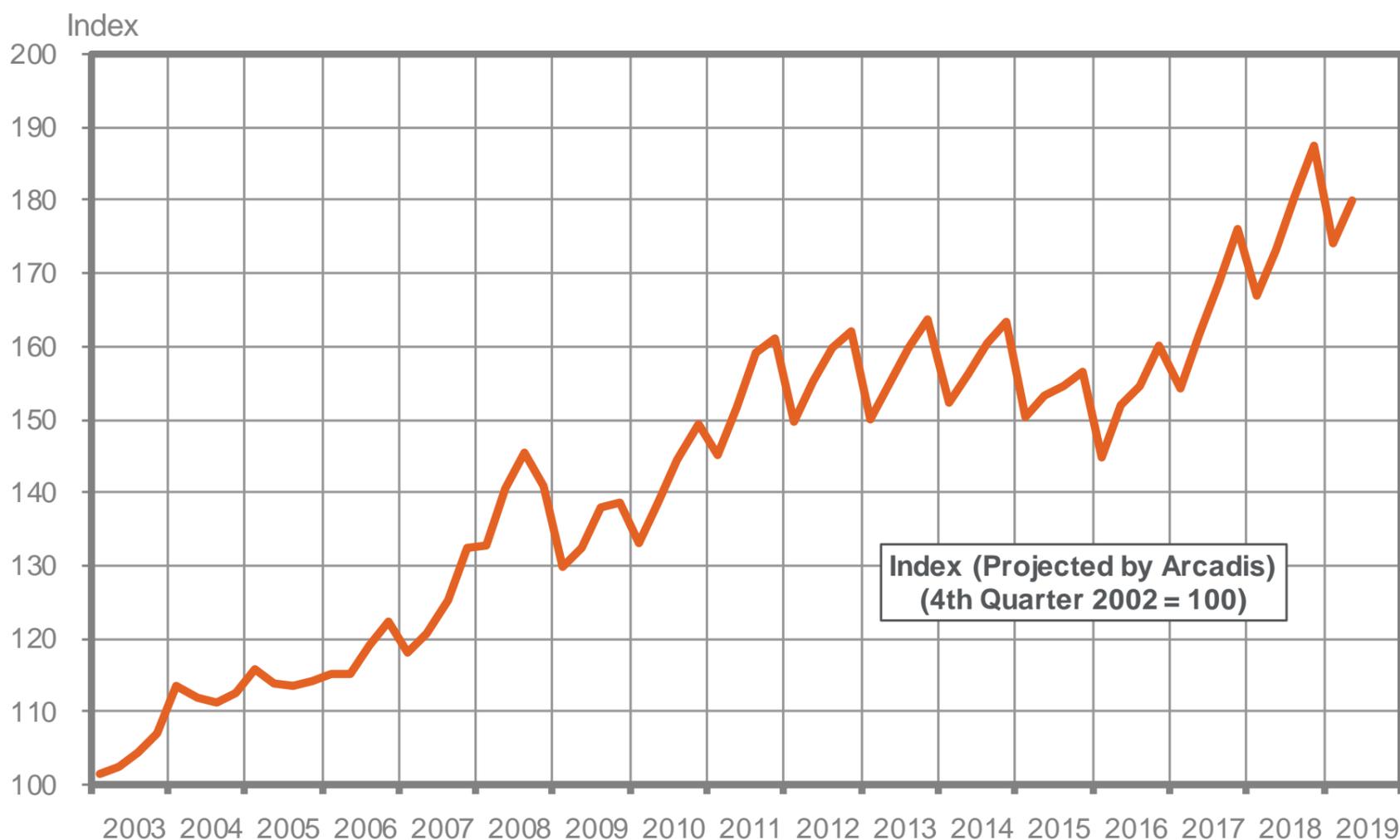
*The above cost are at 2nd Quarter 2019 levels.



3

BUILDING & BUILDING SERVICES PRICE INDEX

MAINLAND CHINA



| BUILDING & BUILDING SERVICES PRICE INDEX | | | | | | | | |
|--|---|-------|-------|-------|--|-------|-------|-------|
| Index | Published (by NBS of China) (Base: Corresponding Quarter in Preceding Year = 100) | | | | Projected (by Arcadis) (Base: Q4/2002 = 100) (see explanatory notes below) | | | |
| | Quarter / Year | 2016 | 2017 | 2018 | 2019 | 2016 | 2017 | 2018 |
| 1st Quarter | 96.4 | 106.4 | 108.4 | 104.2 | 144.9 | 154.1 | 167.1 | 174.1 |
| 2nd Quarter | 99.1 | 106.5 | 106.9 | 104.1 | 152.0 | 161.8 | 173.0 | 180.1 |
| 3rd Quarter | 100.0 | 109.0 | 107.2 | | 154.6 | 168.5 | 180.7 | |
| 4th Quarter | 102.2 | 110.1 | 106.4 | | 160.0 | 176.2 | 187.5 | |

Source : National Bureau of Statistics (NBS) of China

Notes:

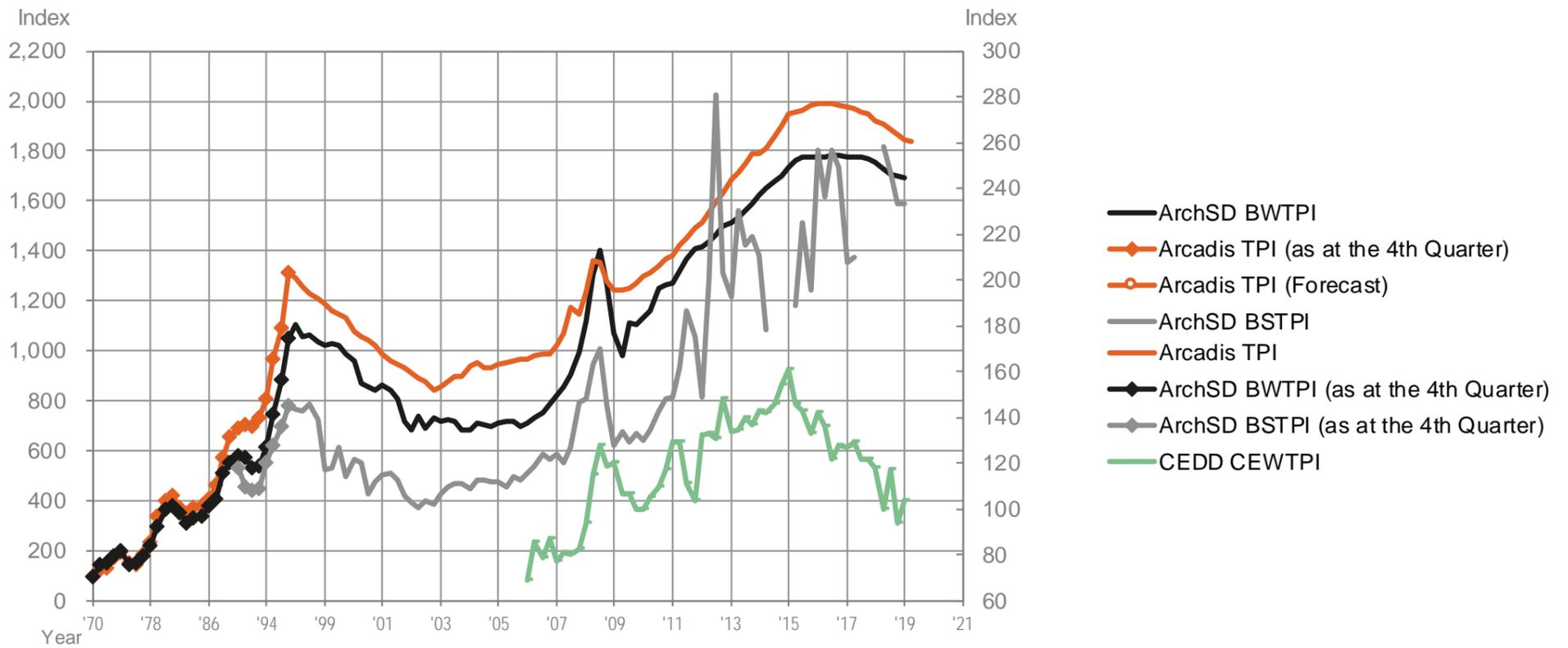
Data are published on a quarterly basis, measuring the year-on-year change in price level of each quarter, but the quarter-on-quarter change is not published, ie. the changes between consecutive quarters are not given.

To give an illustration of the price trend over time, Arcadis applies a hypothetical calculation to derive the data table and chart as above, basing on the following understanding and assumptions:

1. Only indices from 1st Quarter 2003 and onwards are published.
2. For 2002 and before, indices were only published annually. This annual index indicates that the average fluctuation of 2002 was moderate. Arcadis' own in-house data further substantiates that the construction costs in 2002 were rather stable throughout the year.
3. Changes between quarters in 2002 are assumed to be evenly distributed throughout the year. This establishes a notional relationship between the four quarters in 2002 and can be compared with the published data for 2003 to find their notional quarter-on-quarter changes.
4. For comparison purposes, 4th Quarter 2002 is referred to as base and the base index as 100.

\$ 4 TENDER PRICE INDEX

HONG KONG



| Quarter/Year | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|--|------|------|------|------|-------|-------|------|-------|-------|------|
| ArchSD BWTPI (Base = 100, at Year 1970) | | | | | | | | | | |
| 1 st Quarter | 1134 | 1273 | 1414 | 1516 | 1621 | 1732 | 1775 | 1779 | 1755 | 1695 |
| 2 nd Quarter | 1161 | 1320 | 1438 | 1532 | 1648 | 1761 | 1776 | 1776 | 1727 | |
| 3 rd Quarter | 1249 | 1369 | 1467 | 1559 | 1679 | 1777 | 1783 | 1773 | 1708 | |
| 4 th Quarter | 1266 | 1408 | 1496 | 1590 | 1703 | 1775 | 1781 | 1768 | 1698 | |
| ArchSD BSTPI (Base = 100, at Year 1989) | | | | | | | | | | |
| 1 st Quarter | 130 | 149 | 149 | 193 | 211 | (N/A) | 257 | 208 | (N/A) | 233 |
| 2 nd Quarter | 135 | 162 | 200 | 230 | 178 | 189 | 236 | 210 | 258 | |
| 3 rd Quarter | 143 | 187 | 281 | 215 | (N/A) | 225 | 257 | (N/A) | 247 | |
| 4 th Quarter | 148 | 175 | 203 | 219 | (N/A) | 196 | 249 | 287 | 233 | |
| Arcadis TPI (Base = 100, at Year 1970) | | | | | | | | | | |
| 1 st Quarter | 1297 | 1385 | 1511 | 1688 | 1789 | 1946 | 1992 | 1975 | 1920 | 1848 |
| 2 nd Quarter | 1315 | 1425 | 1552 | 1713 | 1808 | 1958 | 1992 | 1968 | 1910 | 1835 |
| 3 rd Quarter | 1342 | 1452 | 1595 | 1747 | 1857 | 1963 | 1993 | 1957 | 1885 | |
| 4 th Quarter | 1367 | 1491 | 1632 | 1786 | 1903 | 1984 | 1986 | 1946 | 1868 | |
| CEWTPI (Base = 100, at Year 2010) | | | | | | | | | | |
| 1 st Quarter | 100 | 129 | 132 | 134 | 143 | 161 | 142 | 127 | 118 | 104* |
| 2 nd Quarter | 105 | 129 | 133 | 135 | 142 | 146 | 136 | 129 | 100 | |
| 3 rd Quarter | 110 | 111 | 131 | 140 | 146 | 143 | 122 | 122 | 117 | |
| 4 th Quarter | 117 | 104 | 148 | 137 | 154 | 133 | 128 | 122 | 94 | |

Source : Competitive tenders received by Arcadis, Building Works Tender Price Index (BWTPI) and Building Services Tender Price Index (BSTPI) of Architectural Services Department (ArchSD) of HKSAR, and Civil Engineering Works Tender Price Index (CEWTPI) of Civil Engineering and Development Department (CEDD) of HKSAR

Notes :

- [*] denotes forecast figures
- Both BWTPI (ArchSD) and Arcadis TPI measure the trend of general builder's works only. Special works and Mechanical and Electrical Services would have to be considered separately.
- All indices were published quarterly. For reference purpose, only indices from 1st quarter of 1998 and onwards are given in detail, whereas indices between year 1970 to 1997 are shown with their 4th Quarter figures.

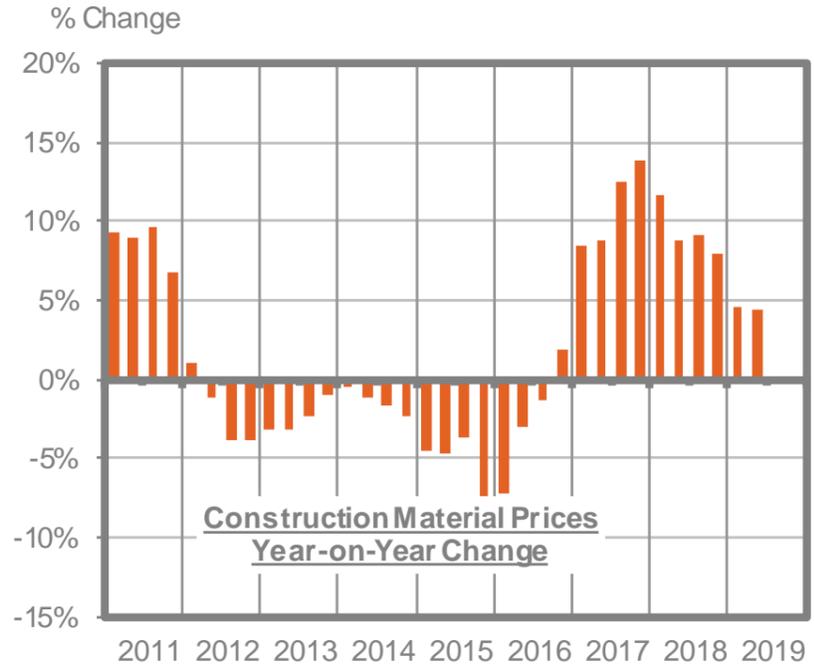


5 MATERIALS

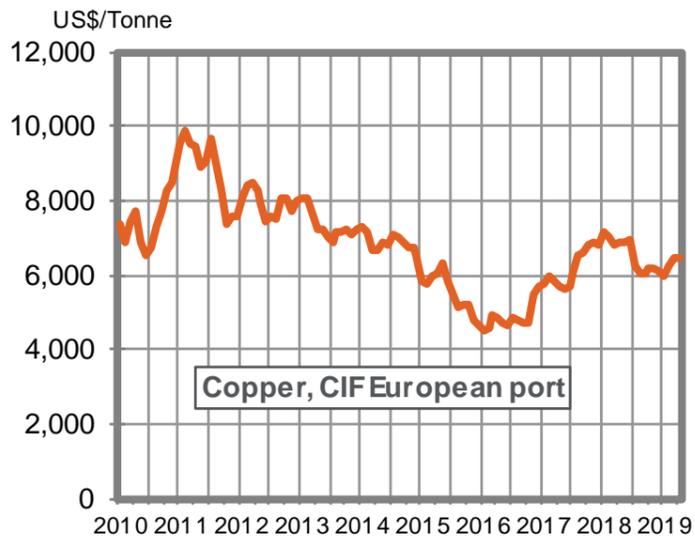
MAINLAND CHINA

| CONSTRUCTION MATERIAL PRICES YEAR-ON-YEAR CHANGE | | | |
|---|-----------|-----------|----------|
| Quarter / Year | 2017 | 2018 | 2019 |
| 1st Quarter | (+) 8.5% | (+) 11.6% | (+) 4.5% |
| 2nd Quarter | (+) 8.7% | (+) 8.7% | (+) 4.4% |
| 3rd Quarter | (+) 12.4% | (+) 9.1% | |
| 4th Quarter | (+) 13.9% | (+) 8.0% | |

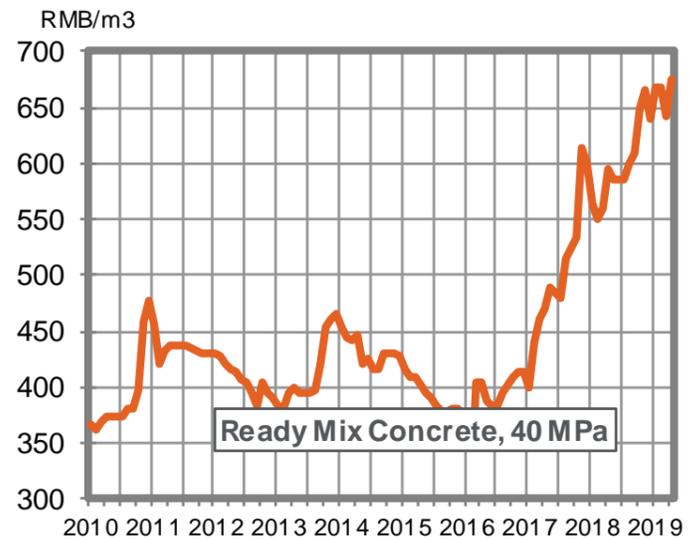
Source : National Bureau of Statistics of China



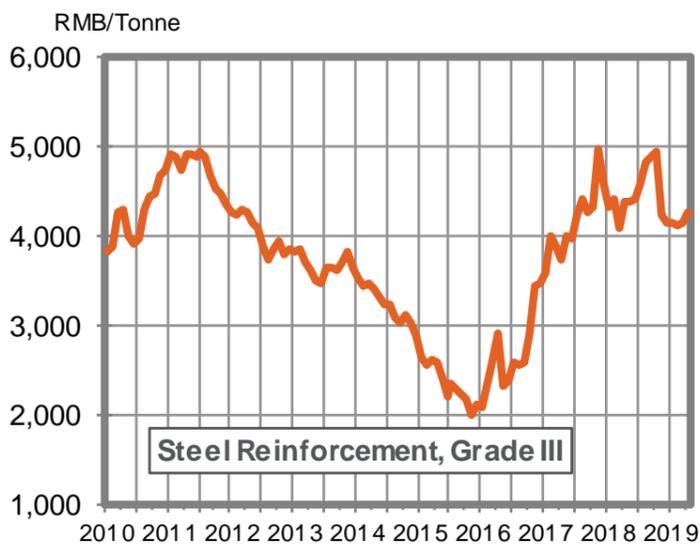
Basic Construction Materials



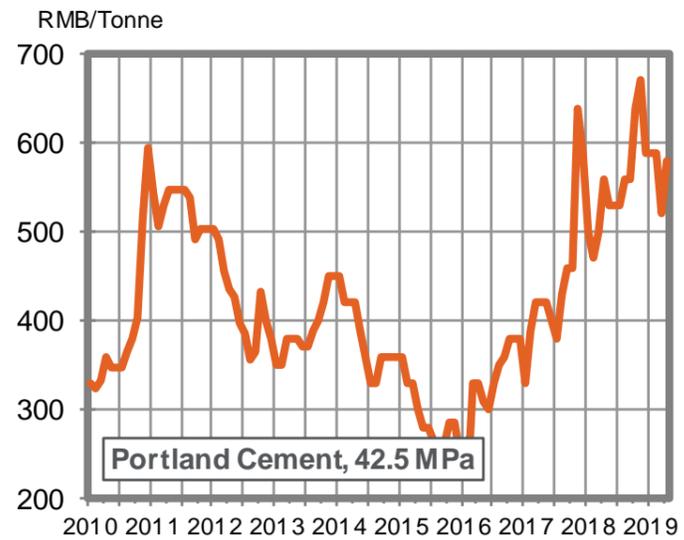
Source : London Metal Exchange



Shanghai Construction & Construction Material Industry Administration Department



Shanghai Construction & Construction Material Industry Administration Department



Shanghai Construction & Construction Material Industry Administration Department

6 LABOUR

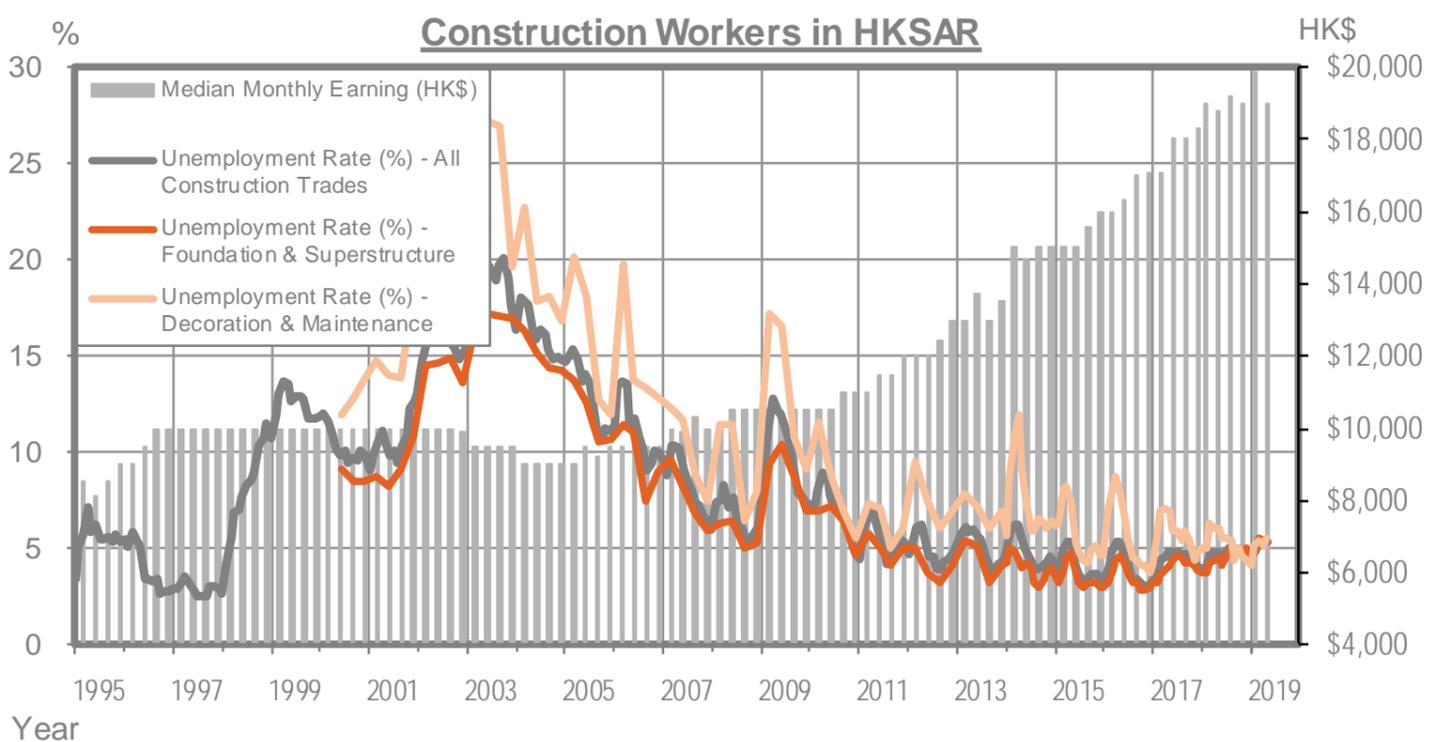
Mainland China

| CONSTRUCTION LABOUR PRICES YEAR-ON-YEAR CHANGE | | | |
|---|----------|----------|----------|
| Quarter / Year | 2017 | 2018 | 2019 |
| 1st Quarter | (+) 3.6% | (+) 3.5% | (+) 4.3% |
| 2nd Quarter | (+) 3.5% | (+) 4.6% | (+) 4.3% |
| 3rd Quarter | (+) 4.0% | (+) 4.8% | |
| 4th Quarter | (+) 4.5% | (+) 4.8% | |

Source : National Bureau of Statistics of China

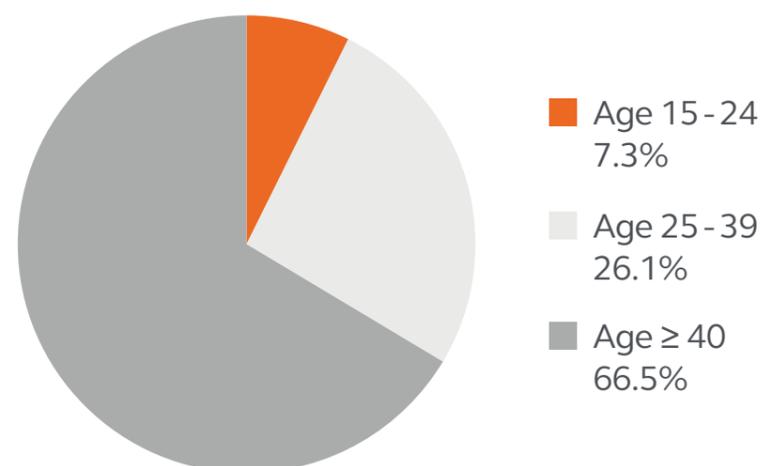


Hong Kong



| Age Group | No. of Workers Employed by Construction Industry | |
|-------------------------|--|--------|
| Age 15 - 24 | 34,506 | 7.3% |
| Age 25 - 39 | 123,095 | 26.1% |
| Age ≥ 40 | 313,379 | 66.5% |
| Total (as at June 2018) | 470,980 | 100.0% |

Source : Construction Industry Council



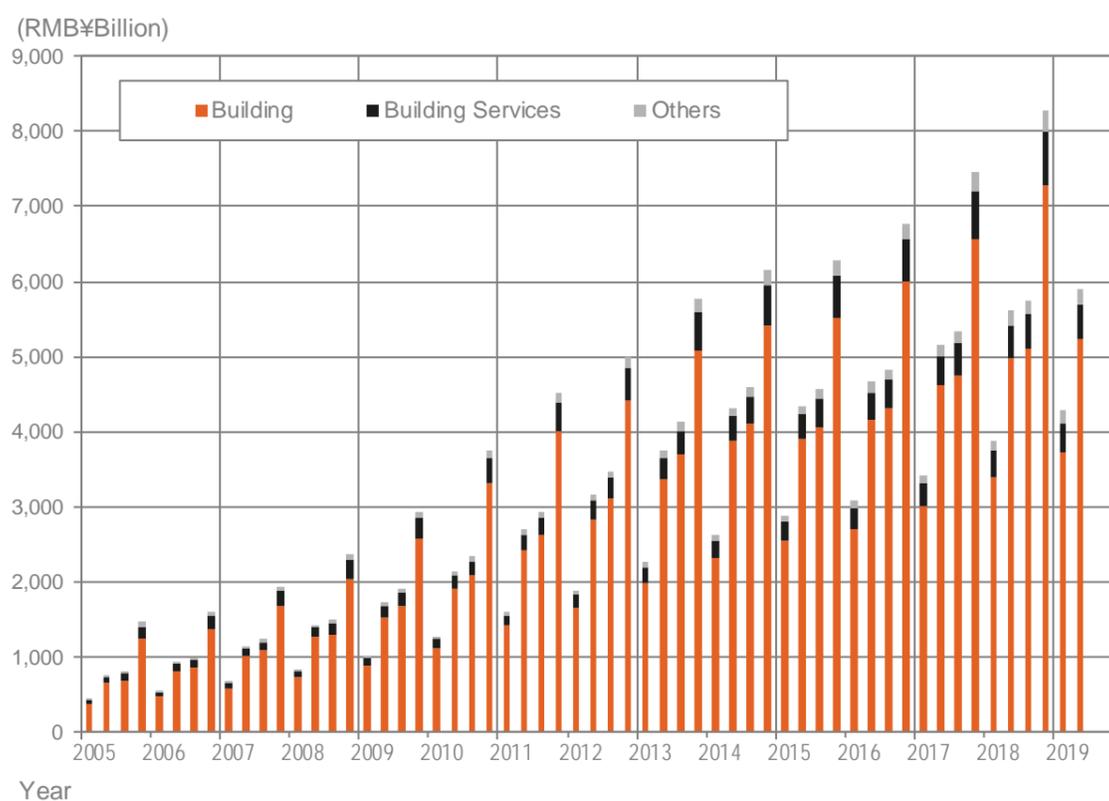
Age Distribution of Workers



7

GROSS VALUE OF CONSTRUCTION WORK PERFORMED

MAINLAND CHINA



| Quarter | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| A. Building | | | | | | | | | | |
| 1 st Quarter | 1,118 | 1,422 | 1,661 | 1,994 | 2,311 | 2,544 | 2,712 | 3,003 | 3,382 | 3,727 |
| 2 nd Quarter | 1,906 | 2,419 | 2,826 | 3,355 | 3,866 | 3,899 | 4,158 | 4,609 | 4,985 | 5,223 |
| 3 rd Quarter | 2,082 | 2,634 | 3,111 | 3,687 | 4,113 | 4,068 | 4,322 | 4,742 | 5,106 | |
| 4 th Quarter | 3,318 | 4,016 | 4,427 | 5,078 | 5,425 | 5,517 | 5,994 | 6,562 | 7,286 | |
| Year Total: | 8,424 | 10,490 | 12,025 | 14,115 | 15,714 | 16,028 | 17,186 | 18,916 | 20,759 | 8,951 |
| B. Building Services | | | | | | | | | | |
| 1 st Quarter | 115 | 141 | 165 | 200 | 230 | 255 | 277 | 303 | 358 | 393 |
| 2 nd Quarter | 183 | 214 | 251 | 300 | 333 | 331 | 366 | 405 | 438 | 476 |
| 3 rd Quarter | 196 | 224 | 271 | 322 | 346 | 363 | 374 | 437 | 459 | |
| 4 th Quarter | 333 | 378 | 413 | 514 | 517 | 548 | 561 | 646 | 708 | |
| Year Total: | 827 | 957 | 1,100 | 1,336 | 1,426 | 1,498 | 1,578 | 1,791 | 1,963 | 869 |
| C. Other | | | | | | | | | | |
| 1 st Quarter | 38 | 47 | 57 | 69 | 83 | 91 | 96 | 113 | 129 | 155 |
| 2 nd Quarter | 60 | 69 | 86 | 100 | 118 | 117 | 138 | 154 | 187 | 186 |
| 3 rd Quarter | 66 | 77 | 97 | 123 | 126 | 126 | 137 | 160 | 189 | |
| 4 th Quarter | 107 | 133 | 166 | 189 | 205 | 216 | 222 | 262 | 282 | |
| Year Total: | 270 | 326 | 406 | 481 | 531 | 550 | 593 | 689 | 787 | 342 |
| Annual gross value performed (A + B + C) | | | | | | | | | | |
| Total: | 9,521 | 11,773 | 13,530 | 15,931 | 17,671 | 18,076 | 19,357 | 21,396 | 23,509 | 10,162 |

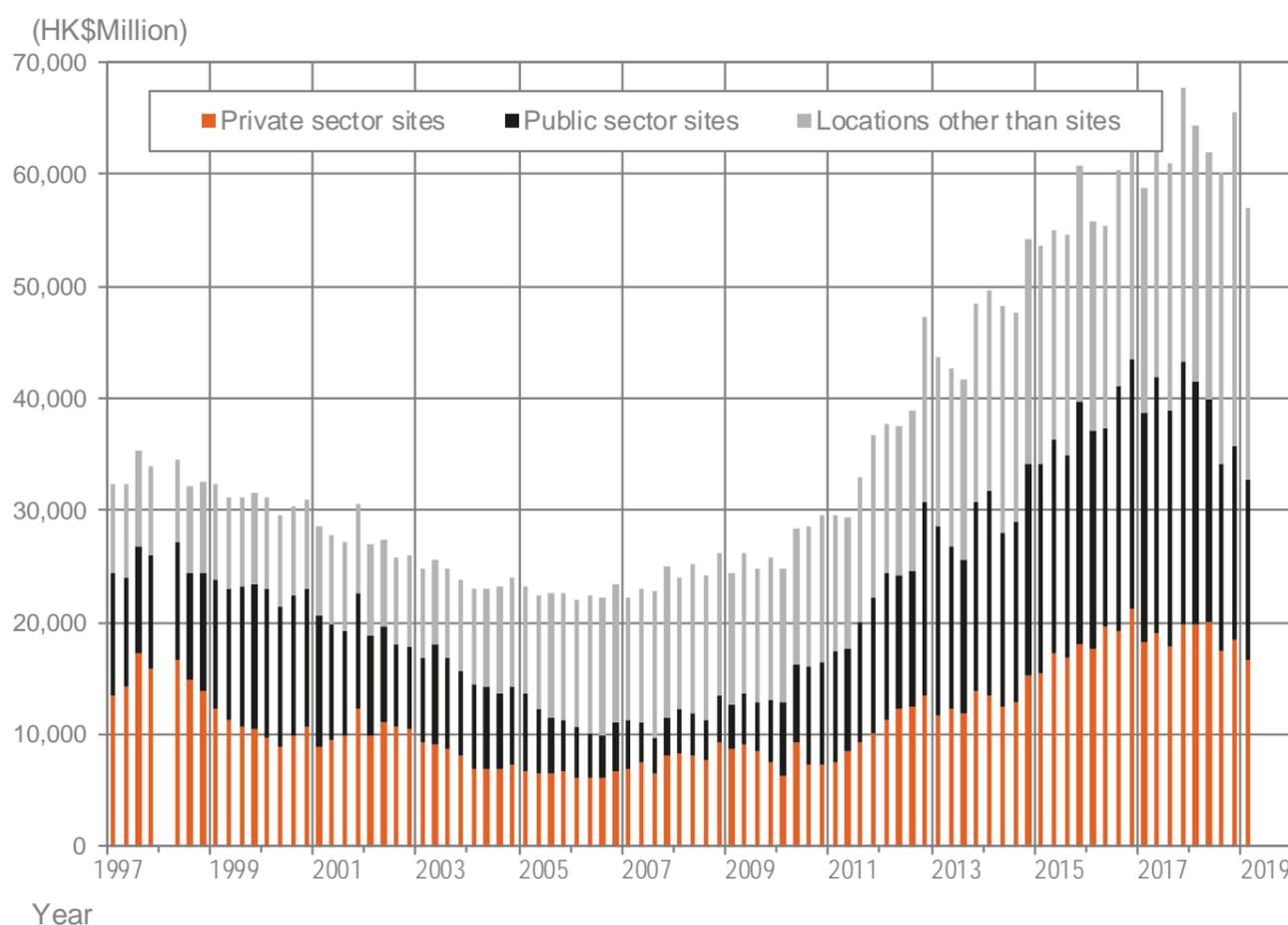
Source : National Bureau of Statistics of China

Notes :

1. Value of "Construction" includes builder's works and building services systems.
2. Value of "Installation" is for assembling and installation of equipment for industrial production, power, load-lifting, transportation, medical and laboratory uses, but excludes supply costs of such equipment.
3. Value of "Others" is generally maintenance and other miscellaneous construction activities.

8 GROSS VALUE OF CONSTRUCTION WORK PERFORMED

HONG KONG



| Value performed (HK\$ Million) | | | | | | | | | | |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Quarter | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 |
| A. Private sector sites | | | | | | | | | | |
| 1 st Quarter | 6,349 | 7,529 | 11,209 | 11,675 | 13,395 | 15,528 | 17,652 | 18,150 | 19,918 | 16,549* |
| 2 nd Quarter | 9,276 | 8,458 | 12,260 | 12,176 | 12,507 | 17,284 | 19,530 | 19,070 | 19,925 | |
| 3 rd Quarter | 7,360 | 9,192 | 12,481 | 11,848 | 12,792 | 16,849 | 19,252 | 17,912 | 17,340 | |
| 4 th Quarter | 7,322 | 10,102 | 13,411 | 13,781 | 15,259 | 18,119 | 21,231 | 19,813 | 18,369 | |
| Year Total: | 30,307 | 35,281 | 49,361 | 49,480 | 53,953 | 67,781 | 77,666 | 74,945 | 75,552 | 16,549* |
| B. Public sector sites | | | | | | | | | | |
| 1 st Quarter | 6,511 | 9,880 | 13,168 | 16,829 | 18,258 | 18,531 | 19,414 | 20,639 | 21,533 | 16,126* |
| 2 nd Quarter | 6,937 | 9,263 | 12,023 | 14,690 | 15,397 | 18,964 | 17,780 | 22,827 | 20,002 | |
| 3 rd Quarter | 8,651 | 10,814 | 12,137 | 13,792 | 16,253 | 18,163 | 21,878 | 20,934 | 16,888 | |
| 4 th Quarter | 9,117 | 12,113 | 17,332 | 16,976 | 18,915 | 21,585 | 22,295 | 23,455 | 17,433 | |
| Year Total: | 31,216 | 42,070 | 54,660 | 62,287 | 68,823 | 77,242 | 81,367 | 87,855 | 75,856 | 16,126* |
| C. Location other than sites | | | | | | | | | | |
| 1 st Quarter | 11,926 | 12,172 | 13,347 | 15,140 | 17,909 | 19,549 | 18,809 | 19,963 | 22,871 | 24,267* |
| 2 nd Quarter | 12,109 | 11,620 | 13,245 | 15,914 | 20,327 | 18,744 | 18,041 | 20,657 | 22,073 | |
| 3 rd Quarter | 12,620 | 12,953 | 14,358 | 16,038 | 18,636 | 19,520 | 19,274 | 22,093 | 26,027 | |
| 4 th Quarter | 13,097 | 14,439 | 16,479 | 17,716 | 20,088 | 21,111 | 21,333 | 24,406 | 29,797 | |
| Year Total: | 49,752 | 51,184 | 57,429 | 64,808 | 76,961 | 78,924 | 77,458 | 87,119 | 100,768 | 24,267* |
| Annual gross value performed (A + B + C) | | | | | | | | | | |
| Total: | 111,275 | 128,535 | 161,450 | 176,575 | 199,737 | 223,847 | 236,491 | 249,919 | 252,176 | 56,942* |

*Provisional

Source : Census and Statistics Department, Hong Kong SAR



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

| BUILDING TYPE | Shanghai | Beijing | Guangzhou/ Shenzhen | Chongqing/ Chengdu |
|---|------------------------|-----------------|---------------------|--------------------|
| | RMB/m ² CFA | | | |
| DOMESTIC | | | | |
| Apartments, high rise, average standard | | | | |
| - Shell and core | 2,682 - 3,093 | 2,692 - 3,105 | 2,476 - 2,745 | 2,581 - 3,013 |
| - Full fit | 4,590 - 5,084 | 4,263 - 4,680 | 3,669 - 4,054 | 3,931 - 4,687 |
| Apartments, high rise, high end | | | | |
| - Shell and core | 3,275 - 3,568 | 3,176 - 4,608 | 2,590 - 3,416 | 3,163 - 4,162 |
| - Full fit | 10,677 - 11,659 | 10,320 - 11,752 | 6,005 - 6,583 | 6,395 - 8,074 |
| Terraced houses, average standard | | | | |
| - Shell and core | 3,064 - 3,277 | 3,108 - 3,630 | 2,783 - 3,065 | 3,188 - 3,855 |
| - Full fit | N/A | 6,097 - 6,610 | N/A | N/A |
| Detached houses, high end | | | | |
| - Shell and core | 4,576 - 5,084 | 4,680 - 5,208 | 3,800 - 4,185 | 4,202 - 4,833 |
| - Full fit | N/A | 11,717 - 12,229 | N/A | N/A |
| OFFICE/COMMERCIAL | | | | |
| Medium/high rise offices, average standard | 5,964 - 7,942 | 5,959 - 8,025 | 5,339 - 5,909 | 6,271 - 7,264 |
| High rise offices, prestige quality | 7,956 - 9,928 | 8,025 - 13,178 | 7,778 - 9,351 | 7,937 - 10,699 |
| Out-of-town shopping centre, average standard | 0 - 0 | 4,541 - 6,071 | 5,147 - 5,648 | 5,050 - 6,479 |
| Retail malls, high end | 8,437 - 10,890 | 8,213 - 11,307 | 7,476 - 10,451 | 7,555 - 10,595 |
| INDUSTRIAL | | | | |
| Industrial units, shell only (Conventional single storey framed units) | 1,924 - 2,350 | 1,878 - 2,288 | 3,415 - 3,759 | 3,056 - 3,861 |
| Owner operated factories, low rise, light weight industry | 2,968 - 3,710 | 3,630 - 4,158 | N/A | N/A |
| HOTELS | | | | |
| Budget hotels - 3-star, mid market | 6,541 - 8,032 | 6,717 - 8,282 | 6,768 - 7,448 | 6,799 - 8,402 |
| Business hotels - 4/5-star | 10,691 - 14,566 | 11,231 - 14,826 | 10,938 - 15,617 | 12,274 - 15,335 |
| Luxury hotels - 5-star | 14,545 - 17,438 | 14,304 - 18,400 | 14,875 - 16,394 | 15,133 - 18,138 |
| OTHERS | | | | |
| Underground/basement car parks (<3 levels) | 5,098 - 7,097 | 5,188 - 5,702 | 3,525 - 5,634 | 2,966 - 4,188 |
| Multi storey car parks, above ground (<4 levels) | 2,625 - 3,655 | 3,122 - 3,157 | 2,522 - 2,776 | 2,349 - 2,911 |
| Schools (primary and secondary) | 3,628 - 4,645 | 3,616 - 4,666 | 2,797 - 3,079 | 3,140 - 3,480 |
| Students' residences | 2,590 - 3,621 | 2,559 - 3,616 | 1,814 - 2,041 | N/A |
| Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E | 6,561 - 8,052 | 6,189 - 6,238 | 5,181 - 5,717 | N/A |
| General hospitals - public sector | 9,743 - 12,635 | 8,136 - 10,187 | N/A | N/A |

* The above costs are at 2nd Quarter 2019 levels.



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

| BUILDING TYPE | Hong Kong | Macau | Singapore | Kuala Lumpur |
|---|---|---------------|---------------|----------------------|
| | USD/ m2 CFA (See also exchange rates per U.S. dollar below) | | | |
| | HK\$ 7.81 | MOP 8.09 | S\$ 1.35 | RM 4.14 |
| DOMESTIC | | | | |
| Apartments, high rise, average standard | | | | |
| - Shell and core | N/A | 1,759 - 2,607 | N/A | N/A |
| - Full fit | 3,035 - 3,534 | 2,265 - 2,771 | 1,370 - 1,555 | 350 - 585 \$ |
| Apartments, high rise, high end | | | | |
| - Shell and core | N/A | 2,607 - 3,910 | N/A | N/A |
| - Full fit | 3,969 - 4,635 | 3,164 - 4,834 | 2,110 - 3,150 | 715 - 1,130 |
| Terraced houses, average standard | | | | |
| - Shell and core | N/A | 3,088 - 3,834 | N/A | N/A |
| - Full fit | 4,123 - 4,814 | 3,860 - 4,606 | 1,780 - 2,000 | 220 - 350 \$\$ |
| Detached houses, high end | | | | |
| - Shell and core | N/A | 3,733 - 5,378 | N/A | N/A |
| - Full fit | 6,108 up | 4,708 - 6,125 | 2,260 - 3,000 | 745 - 990 |
| OFFICE/COMMERCIAL | | | | |
| Medium/high rise offices, average standard | 2,983 - 3,470 | 2,607 - 3,366 | 1,780 - 2,000 | 575 - 750 \$\$\$ |
| High rise offices, prestige quality | 3,598 - 4,200 | 3,366 - 3,683 | 2,000 - 2,185 | 870 - 1,265 \$\$\$ |
| Out-of-town shopping centre, average standard | 2,958 - 3,508 | 2,455 - 3,683 | 2,000 - 2,110 | 555 - 725 |
| Retail malls, high end | 3,905 - 4,661 | 3,860 - 4,657 | 2,110 - 2,335 | 685 - 1,010 |
| INDUSTRIAL | | | | |
| Industrial units, shell only (Conventional single storey framed units) | N/A | N/A | 780 - 965 | 320 - 435 |
| Owner operated factories, low rise, light weight industry | 2,305 - 2,919 | N/A | N/A | 435 - 525 |
| HOTELS | | | | |
| Budget hotels - 3-star, mid market | 3,816 - 4,097 | 3,429 - 3,885 | 2,220 - 2,445 | 1,030 - 1,410 |
| Business hotels - 4/5-star | 3,995 - 4,661 | 4,657 - 5,568 | 2,850 - 3,220 | 1,735 - 2,195 |
| Luxury hotels - 5-star | 4,661 - 5,391 | 5,568 - 6,581 | 2,850 - 3,220 | 1,955 - 2,460 |
| OTHERS | | | | |
| Underground/basement car parks (<3 levels) | 3,201 - 3,841 | 2,037 - 2,987 | 965 - 1,295 | 315 - 535 |
| Multi storey car parks, above ground (<4 levels) | 1,921 - 2,279 | 1,126 - 1,481 | 665 - 965 | 220 - 350 |
| Schools (primary and secondary) | 2,510 - 2,702 | 2,253 - 2,607 | N/A | 250 - 310 \$\$\$\$ |
| Students' residences | 2,907 - 3,291 | 1,784 - 2,075 | 1,630 - 1,780 | 300 - 365 \$\$\$\$\$ |
| Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E | 3,790 - 4,392 | N/A | 2,035 - 2,185 | 600 - 735 |
| General hospitals - public sector | 4,891 - 5,480 | N/A | 2,850 - 3,000 | 865 - 1,165 |

* The above costs are at 2nd Quarter 2019 levels.



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

| BUILDING TYPE | Bangkok | Jakarta | Manila | Ho Chi Minh |
|---|---|---------------|---------------|---------------|
| | USD/ m2 CFA (See also exchange rates per U.S. dollar below) | | | |
| | BAHT 30.55 | IDR 14,223 | PHP 52.06 | VND 23,300 |
| DOMESTIC | | | | |
| Apartments, high rise, average standard | | | | |
| - Shell and core | 573 - 736 | N/A | N/A | N/A |
| - Full fit | 786 - 933 | 808 - 914 | 949 - 1,167 | 650 - 806 |
| Apartments, high rise, high end | | | | |
| - Shell and core | 671 - 867 | N/A | N/A | N/A |
| - Full fit | 1,047 - 1,293 | 1,109 - 1,251 | 1,262 - 2,135 | 827 - 948 |
| Terraced houses, average standard | | | | |
| - Shell and core | 327 - 426 | N/A | N/A | N/A |
| - Full fit | 491 - 606 | 428 - 558 | 798 - 977 | 438 - 514 |
| Detached houses, high end | | | | |
| - Shell and core | 573 - 818 | N/A | N/A | N/A |
| - Full fit | 851 - 1,031 | 1,160 - 1,296 | 1,709 - 2,898 | 500 - 610 |
| OFFICE/COMMERCIAL | | | | |
| Medium/high rise offices, average standard | 786 - 933 # | 796 - 882 | 931 - 1,090 | 760 - 880 |
| High rise offices, prestige quality | 982 - 1,260 ## | 1,169 - 1,307 | 1,262 - 1,415 | 877 - 1,195 |
| Out-of-town shopping centre, average standard | 671 - 867 | 686 - 759 | 760 - 947 | N/A |
| Retail malls, high end | 900 - 949 | 755 - 817 | 1,091 - 1,528 | 710 - 930 |
| INDUSTRIAL | | | | |
| Industrial units, shell only (Conventional single storey framed units) | 524 - 655 | 371 - 404 | 509 - 573 | 312 - 393 |
| Owner operated factories, low rise, light weight industry | N/A | 401 - 442 | 683 - 855 | 353 - 465 |
| HOTELS | | | | |
| Budget hotels - 3-star, mid market | 1,227 - 1,358 | 1,383 - 1,634 | 1,193 - 1,330 | 1,410 - 1,725 |
| Business hotels - 4/5-star | 1,571 - 1,800 | 1,883 - 2,033 | 1,344 - 1,629 | N/A |
| Luxury hotels - 5-star | 1,833 - 2,128 | 1,995 - 2,250 | 1,848 - 2,785 | 1,780 - 2,137 |
| OTHERS | | | | |
| Underground/basement car parks (<3 levels) | 589 - 786 | 572 - 701 | 493 - 736 | 645 - 770 |
| Multi storey car parks, above ground (<4 levels) | 196 - 321 | 371 - 404 | 474 - 669 | 415 - 455 |
| Schools (primary and secondary) | N/A | N/A | 700 - 965 | 545 - 595 |
| Students' residences | N/A | N/A | 740 - 949 | 545 - 700 |
| Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E | N/A | 1,156 - 1,732 | 1,183 - 1,722 | 806 - 862 |
| General hospitals - public sector | N/A | N/A | 1,421 - 1,544 | N/A |

* The above costs are at 2nd Quarter 2019 levels.



9 APPROXIMATE BUILDING COSTS FOR MAJOR CITIES

ASIA

| BUILDING TYPE | OUTLINE SPECIFICATION |
|---|---|
| DOMESTIC | |
| Apartments, high rise, average standard | <u>Shell and core</u> , including finishes to public area, but <u>excluding</u> finishes to apartment units <u>Full fit</u> , with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings and loose furniture |
| Apartments, high rise, high end | <u>Shell and core</u> , including finishes to public area, but <u>excluding</u> finishes to apartment units <u>Full fit</u> , good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings and loose furniture |
| Terraced houses, average standard | <u>Shell and core</u> , joined houses in row(s), <u>excluding</u> garden, parking, finishes and fittings to house interior <u>Full fit</u> , joined houses in row(s), with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings, loose furniture, garden and parking |
| Detached houses, high end | <u>Shell and core</u> , good quality facade, <u>excluding</u> garden, parking, finishes and fittings to house interior <u>Full fit</u> , good quality provisions, with air-conditioning, kitchen cabinets and home appliances, but <u>excluding</u> decorative light fittings, loose furniture, garden and parking |
| OFFICE / COMMERCIAL | |
| Medium/high rise offices, average standard | RC structure, curtain wall, including public area fit-out, tenant area with raised floor/ carpet, painted wall and false ceiling |
| High rise offices, prestige quality | |
| Out-of-town shopping centre, average standard | Including public area fit-out and M&E, but <u>excluding</u> shop fit-out |
| Retail malls, high end | |
| INDUSTRIAL | |
| Industrial units, shell only (Conventional single storey framed unit) | RC structure with steel roof and M&E to main distribution, but <u>excluding</u> a/c, heating and lighting |
| Owner operated factories, low rise, light weight industry | RC structure, including small office with simple fit-out and M&E, but <u>excluding</u> a/c and heating |
| HOTEL | |
| Budget hotels - 3-star, mid market | 1) Interior decoration 2) Furniture (fixed and movable) 3) Special light fittings (chandeliers, etc.) 4) Operating Supplies and Equipment (OS&E) excluded |
| Business hotels - 4/5-star | |
| Luxury hotels - 5-star | |
| OTHERS | |
| Underground/basement car parks (<3 levels) | RC structure |
| Multi storey car parks, above ground (<4 levels) | RC structure, natural ventilation, no facade enclosure |
| Schools (primary and secondary) | Including fit-out and a/c, but <u>excluding</u> educational equipment |
| Students' residences | Including fit-out, loose furniture and a/c |
| Sports clubs, multi purpose sports/leisure centres (dry sports) | Dry sports (no swimming pool) and are for 'leisure centre' type schemes including main sports hall, ancillary sports facilities, changing and showers, restaurant / cafe, bar, etc. Costs include a/c, Furniture, Fittings and Equipment (FF&E) |
| General hospital - public sector | <u>Excluding</u> medical and operating equipment |

Notes :

- The costs for the respective categories given above are averages based on fixed price competitive tenders. It must be understood that the actual cost of a building will depend upon the design and many other factors and may vary from the figures shown.
- The costs per square metre are based on Construction Floor Areas (CFA) measured to the outside face of the external walls / external perimeter including lift shafts, stairwells, balconies, plant rooms, water tanks and the like.
- All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site conditions. The cost excludes site formation works, external works, land cost, professional fees, finance and legal expenses.
- The standard for each category of building varies from region to region and do not necessarily follow that of each other.
- "Shell and core" generally covers ONLY base building elements. "Shell" refers to overall structure and foundations, exterior walls, floors and roof, completing with common areas, staircases, lift shafts, service ducts and fire services systems to local statutory requirements. "Core" refers to fully-fitted public areas (like lobbies, corridors and lavatories) and M&E main plant and upfeed, with tenant or occupant areas unfurnished.
- "Full fit" buildings should complete with all elements that allow the buildings to be ready for operation, including public and tenants' (or occupants') areas (i.e. with ALL finishes, fittings and M&E distributions).
- Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.
- Hong Kong: ** Public authority standard, no a/c and complete with basic external works Singapore: @ Excluding carpet @@ Open on all sides with parapet Kuala Lumpur \$ 6-12 units per floor, 46m² - 83m² per unit; excluding air-conditioning \$\$ Excluding air-conditioning, Kitchen cabinets and home appliances \$\$\$ Exclude Tenant fit-out \$\$\$\$ Standard government provisions \$\$\$\$\$ University standard Bangkok # (i) Excluding raised floor/carpet and inter-tenancy partition (ii) Facade in windows and brick wall/pre-cast concrete panel ## Excluding raised floor/carpet and inter-tenancy partition



OUR OFFICES IN GREATER CHINA

HONG KONG

17/F, Two Harbour Square, 180 Wai Yip Street,
Kwun Tong, Kowloon,
Hong Kong
T: (852) 2911 2000
F: (852) 2911 2002
E: asiacomms@arcadis.com

BEIJING

Suite 1225 - 1242, South Wing Central Tower,
Junefield Plaza
10 Xuan Wu Men Wai Street Beijing 100052, China
T: (86 10) 6310 1136
F: (86 10) 6310 1143
E: info-cn@arcadis.com

CHANGSHA

Room 2315-2317, HUAYUAN International Center,
No.36 Section 2,
Xiangjiang Middle Road,
Tianxin District,
Changsha, Hunan Province,
410002, China
T: (86 731) 8277 2500
F: (86 731) 8971 6736
E: info-cn@arcadis.com

CHENGDU

Room 807 Block A
Times Plaza 2 Zong Fu Road
Chengdu, Sichuan Province 610016 China
T: (86 28) 8671 8373
F: (86 28) 8671 8535
E: info-cn@arcadis.com

CHONGQING

Room 3409 - 3410
International Trade Centre
38 Qing Nian Road
Central District
Chongqing 400010, China
T: (86 23) 8655 1333
F: (86 23) 8655 1616
E: info-cn@arcadis.com

DALIAN

Unit 07, 32F, Xiwang Tower
136 Zhongshan Road Zhongshan District
Dalian, Liaoning Province 116001 China
T: (86 411) 8800 8018
F: (86 411) 8800 8823
E: info-cn@arcadis.com

FOSHAN

Room 1002-1004, 10F,
LNTD Commercial Plaza,
No.29, Zumiao Road,
Chancheng District, Foshan,
Guangdong Province, 528000, China
T: (86 757) 8203 0028
F: (86 757) 8203 0029
E: info-cn@arcadis.com

GUANGZHOU

3A10-18 Unit, 3A/F
Bank of America Plaza
555 Ren Min Zhong Road Guangzhou
Guangdong Province 510145 China
T: (86 20) 8130 3813
F: (86 20) 8130 3812
E: info-cn@arcadis.com

HAIKOU

Unit C, 10/F, Times Square
2 Guomao Road
Haikou, Hainan Province 570100
China
T: (86 898) 6652 7818
F: (86 898) 6652 7809
E: info-cn@arcadis.com

HANGZHOU

Room 1306 WinNing International
100 Min Xin Road
Hangzhou
Zhejiang Province 310016, China
T: (86 571) 2829 7766
F: (86 571) 2829 7622
E: info-cn@arcadis.com

HENGQIN

7/F, 156 Nan Shan Ju Road
Hengqin, Zhuhai
Guangdong Province 519031
China
T: (86 756) 868 8986
F: (86 756) 868 8969
E: info-cn@arcadis.com

MACAU

12th Floor
Avenida da Praia Grande No. 594
Edificio BCM Macau
T: (853) 2833 1710
F: (853) 2833 1532
E: info-mo@arcadis.com

NANJING

Room 1104
South Tower Jinmao Plaza
201 Zhong Yang Road
Nanjing 210009 China
T: (86 25) 5791 1860
F: (86 25) 6698 1860
E: info-cn@arcadis.com

QINGDAO

Room 2008, 20/F, HNA Center
234 Yan An San Road
Shinan District
Qingdao
Shangdong Province 266071
China
T: (86 532) 8280 1818
F: (86 532) 8280 1881
E: info-cn@arcadis.com

SHANGHAI

11th Floor, Building C, The Place
No. 150 Zunyi Road
Changning District
Shanghai 200051 China
T: (86 21) 6026 1300
F: (86 21) 6026 1800
E: info-cn@arcadis.com

SHENYANG

Room 3013-3015
Office Tower 1, Forum66
1-1 Qingnian Avenue
Shenhe District
Shenyang
Liaoning Province 110063 China
T: (86 24) 3195 8880
F: (86 24) 3128 6983
E: info-cn@arcadis.com

SHENZHEN

Room 1001, AVIC Centre
1018 Huafu Road
Shenzhen
Guangdong Province 518031 China
T: (86 755) 2598 1841
F: (86 755) 2598 1854
E: info-cn@arcadis.com

SUZHOU

Room 906 The Summit,
118 Suzhou Avenue West,
Suzhou,
Jiangsu Province 215021 China
T: (86 512) 8777 5599
F: (86 512) 8777 5600
E: info-cn@arcadis.com

TIANJIN

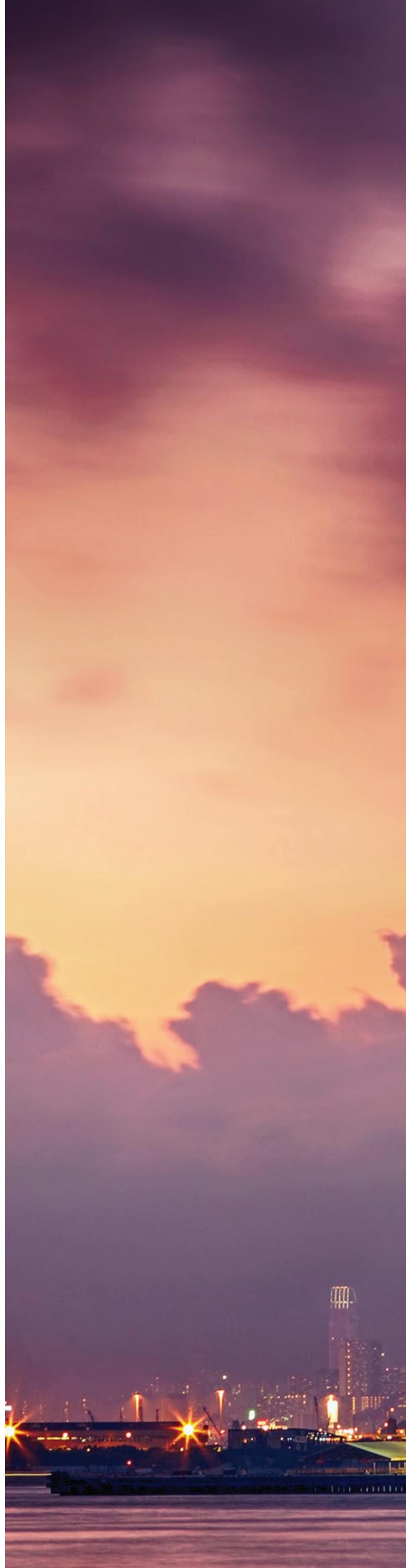
4002, 40F,
Tianjin World Financial Centre Office Tower
2 Dagubei Road
Heping District
Tianjin 300020
China
T: (86 22) 2329 8611
F: (86 22) 2319 3186
E: info-cn@arcadis.com

WUHAN

Room 1703, Citic Pacific Mansion,
No.1627 Zhongshan Avenue,
Jiangan District, Wuhan,
Hubei Province 430 010, China
T: (86 27) 5920 9299
F: (86 27) 5923 9298
E: info-cn@arcadis.com

XI'AN

Room 1606 - 1607
CapitaMall Office Building
64 South Second Ring Western Xi'an
Shaanxi Province 710065 China
T: (86 29) 8866 9711
F: (86 29) 8866 9760
E: info-cn@arcadis.com



 @ArcadisAsia

 ArcadisAsia

www.arcadis.com

Arcadis. Improving quality of life