



**INAUGURAL MAPLETREE REAL ESTATE ANNUAL LECTURE:
HOW TO GROW SINGAPORE INTO
A PREMIER FINANCIAL CENTRE
FOR REAL ESTATE INVESTMENTS**

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SMU REAL ESTATE PROGRAMME WAS
LAUNCHED WITH THE MAPLETREE
GRANT OF **SGD3 MILLION**

1. MAPLETREE REAL ESTATE PROGRAMME



**SMU TO OFFER
SPECIALISATION IN
REAL ESTATE
INVESTMENT &
FINANCE FROM
AUGUST 2018**

12 Jan 2018

- **Mapletree
Professorship in Real
Estate**
- **Mapletree Real
Estate Study Trip**
- **Mapletree Real
Estate Annual
Lecture**
- **Mapletree Speaker
Events**

2. THE SMU REAL ESTATE TRACK

- Designed to provide Finance and Economics majors the opportunity to widen and deepen their knowledge and understanding of real estate.
- Courses leverage on the fundamentals of Finance, Business and Economics to enable students to take on careers in real estate investments, finance and corporate leadership.

**FOCUS OF THE REAL ESTATE TRACK IN SMU
IS ON GLOBAL INVESTMENTS AND FINANCE**



THE GLOBAL REAL ESTATE INVESTMENT MARKET

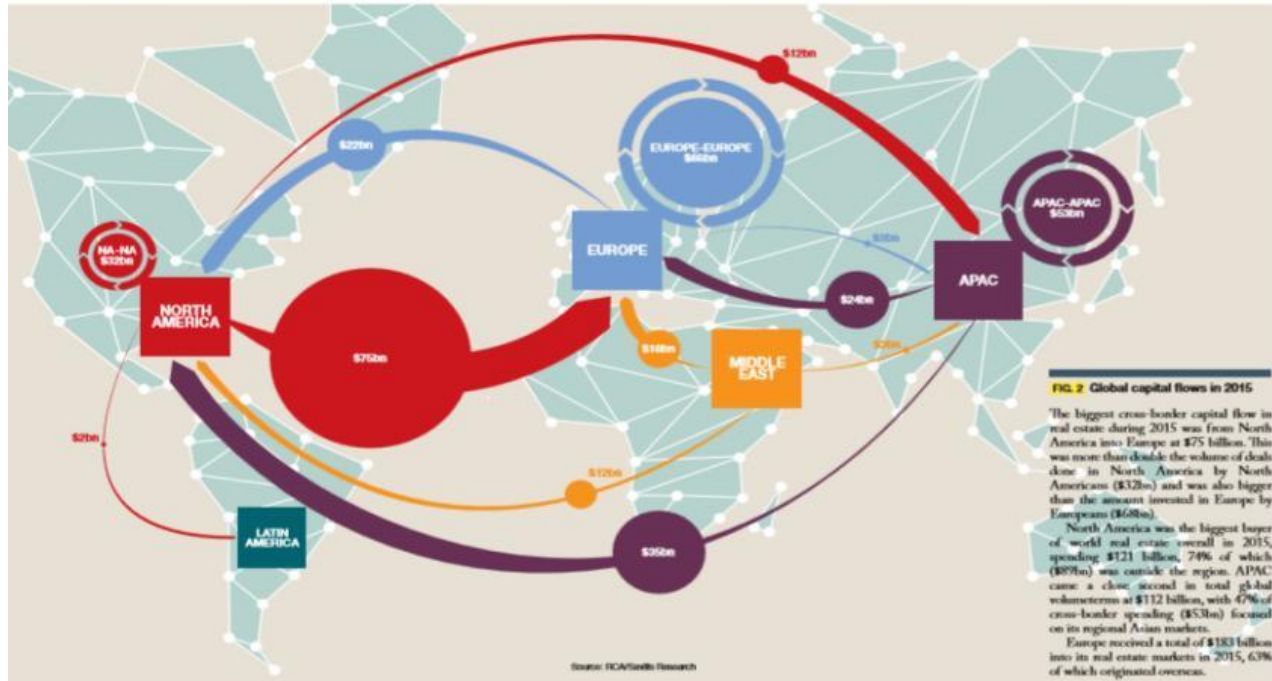
3. THE GLOBAL REAL ESTATE INVESTABLE UNIVERSE ESTIMATED AT \$81 TRILLION

ASSET*	Investable (USD trillions)	Non-Investable (USD trillions)	All (USD trillions)
ALL REAL ESTATE	\$81	\$136	\$217
RESIDENTIAL	\$54	\$108	\$162
HIGH QUALITY, GLOBAL, COMMERCIAL	\$19	\$10	\$29
AGRICULTURAL LAND	\$8	\$18	\$26
OTHER INVESTMENTS	-	-	\$155
EQUITIES	\$55	-	\$55
OUTSTANDING SECURITISED DEBT	\$94	-	\$94
ALL GOLD EVER MINED	-	-	\$6
GLOBAL MAINSTREAM ASSET UNIVERSE	-	-	\$372

*(values in US\$ trillions – rounded) Sources: Savills Research, Bank for International Settlements, Dow Jones Total Stock Market Index, Oxford Economics SAVILLS, AROUND THE WORLD IN DOLLARS AND CENTS, 2016

According to PwC, the global Real Estate market (Institutional-Grade) will grow at about **6% P.A TILL 2020**

4. ASIA-PACIFIC IS 2ND MOST ACTIVE GLOBAL REAL ESTATE MARKET WITH INVESTMENT FLOWS OF \$112 BILLION



The global investable real estate universe has seen strong growth and will further expand over the next decade, especially in Asia.



GLOBAL REAL ESTATE
PROPELLED BY MEGATRENDS

5. GLOBAL MEGATRENDS INFLUENCE REAL ESTATE INVESTMENTS



6. FIRST MEGATREND: GROWTH OF POPULATION

World Population Statistics: 2030

POPULATION (BILLION)

8.5

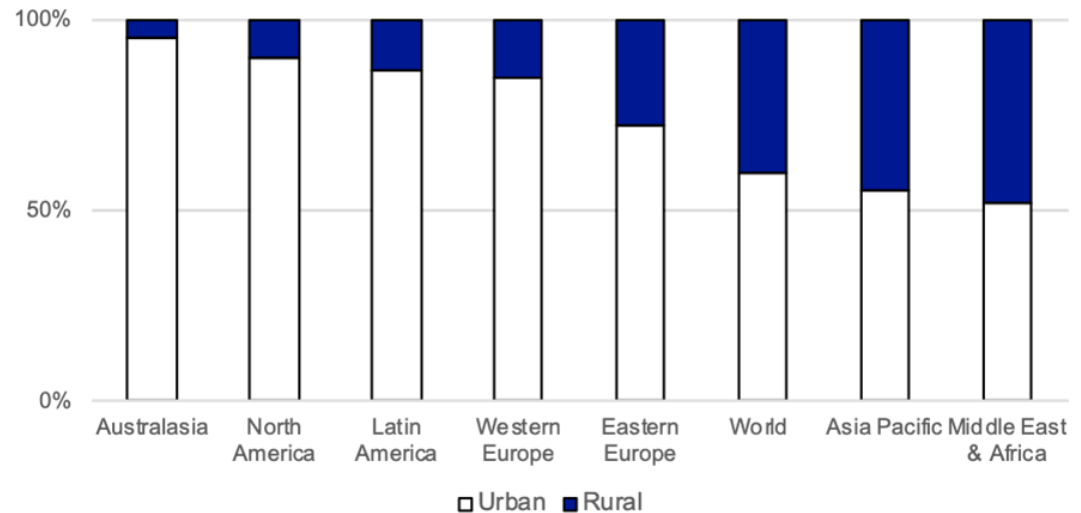
MEDIAN AGE (YEARS)

32.8

LIFE EXPECTANCY (YEARS)

74.4

Population by Urban/Rural Location 2030



SOURCE: EUROMONITOR, PASSPORT, 2018 INTERNATIONAL

It is estimated that by 2030, **60%** of the world's population will be living in urban areas.

7. POPULATION GROWTH & URBANISATION OFFER INVESTMENT OPPORTUNITIES



Urbanisation and Mega Cities provide opportunities for investments:



Residential

- High-end housing
- Multi-family housing (rentable apartments)
- Affordable housing
- Senior housing



Hotels, shopping and leisure facilities



Office buildings and logistic facilities



Selective student accommodation in Australia, UK and USA

Q1:

**WHAT CAN SINGAPORE DO TO PROMOTE MORE
OUTWARD INVESTMENTS IN REAL ESTATE?**

8. SECOND MEGATREND: TECHNOLOGY LED TO AN INTERNET-SAVVY POPULATION



SOURCE: EUROMONITOR, PASSPORT, 2018

3.6bn

GLOBAL INTERNET USERS AS OF 2018, WHICH EQUATES TO HALF OF THE POPULATION

53%

CONNECTED CONSUMERS REPORT THEY WOULD BE LOST WITHOUT THE INTERNET

31%

CONNECTED CONSUMERS PREFER ONLINE COMMUNICATION RATHER THAN OTHER MEANS

Technology enables universal use of internet for daily living, including online business (e-commerce), new forms of logistic and retail facilities

9. SHIFT TOWARDS THE “INTERNET OF THINGS” REVOLUTIONISES LOGISTICS AND SUPPLY CHAINS



<p>Fulfilment logistics Sensor-based technology enables companies to track orders from the moment an order is placed and through the supply chain until the moment it reaches the consumer’s doorstep.</p>	<p>Auto replenishment Given that many durable goods require continuous replenishment, there is an opportunity to automate the ordering process by leveraging the IoT to track consumption and automate the order.</p>	<p>Goods “as a service” Manufacturers could adopt service-oriented business models by offering remote monitoring, performance analytics and predictive maintenance as an on-going service to end-users.</p>
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SOURCE: EUROMONITOR, PASSPORT, 2018

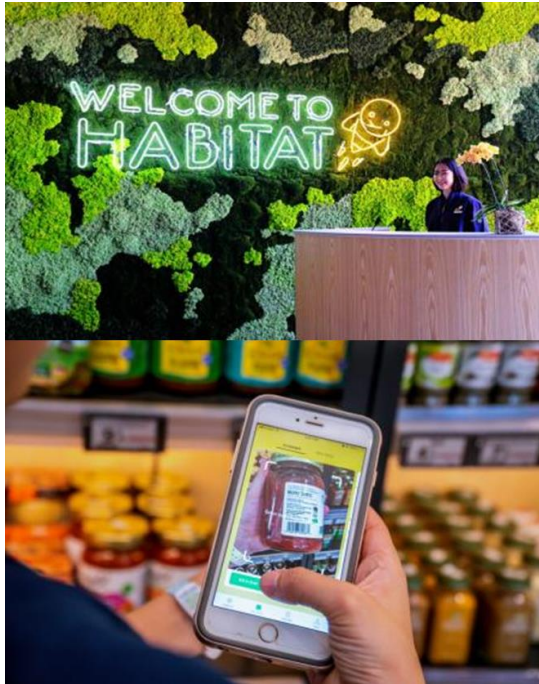
Technology has led to new forms of techno-enabled services

10. ALIBABA OFFERS A NEW RETAIL CONCEPT OF ONLINE/OFFLINE SHOPPING

- Alibaba Group created a new “three-kilometer ideal living community” concept, empowered by convenient, online-offline services through collaborations with:
 - Hema, the B2C e-commerce site
 - Ofo, bike-sharing platform, and
 - AutoNavi, mapping and navigation services provider
- 1.5 million Beijing residents who live within a three-kilometer radius of a HEMA store can have their groceries delivered to their doors as quickly as 30 minutes after ordering



Technology has created new shopping experiences



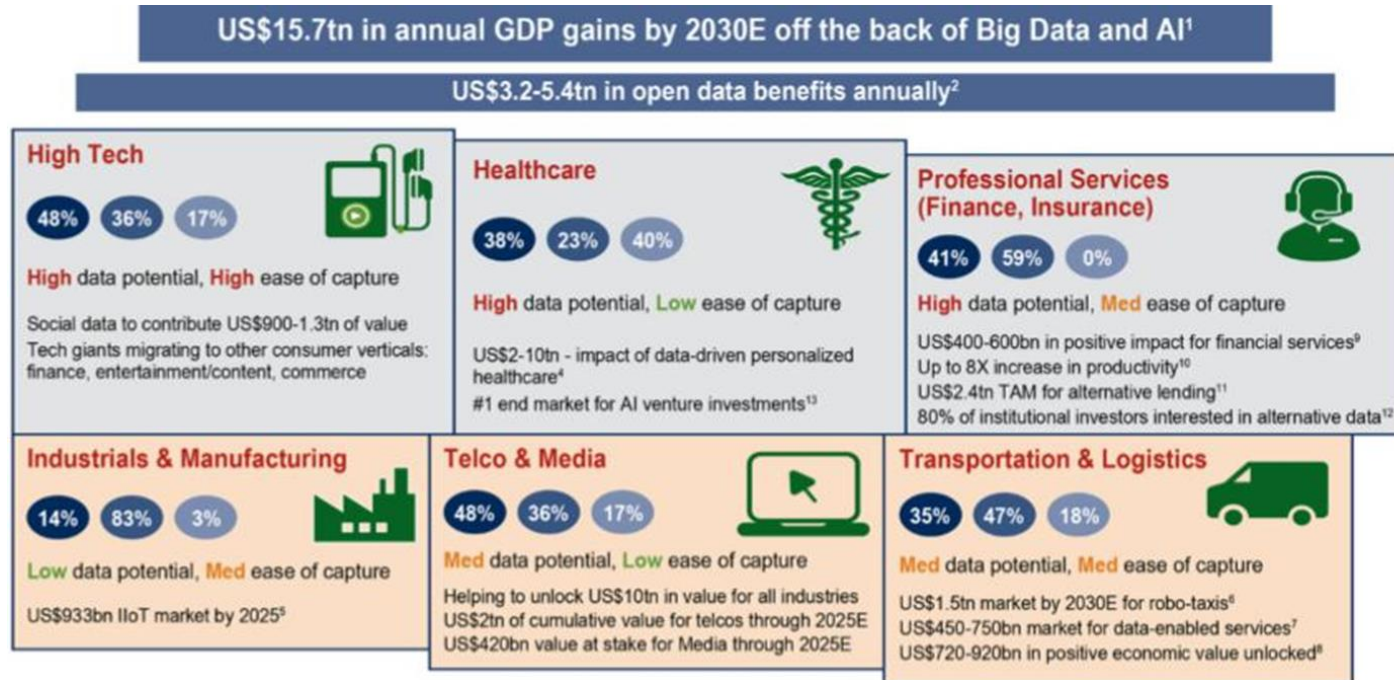
SOURCEHABIT.HONESTBEE.SG

HONESTBEE SINGAPORE HAS 60,000 SQFT OF “NEW GENERATION RETAIL SPACE” POWERED BY TECHNOLOGY

Claimed as the world’s first tech-enabled, cashless, multi-sensory grocery and dining experience.

Will this be the supermarket of the future?

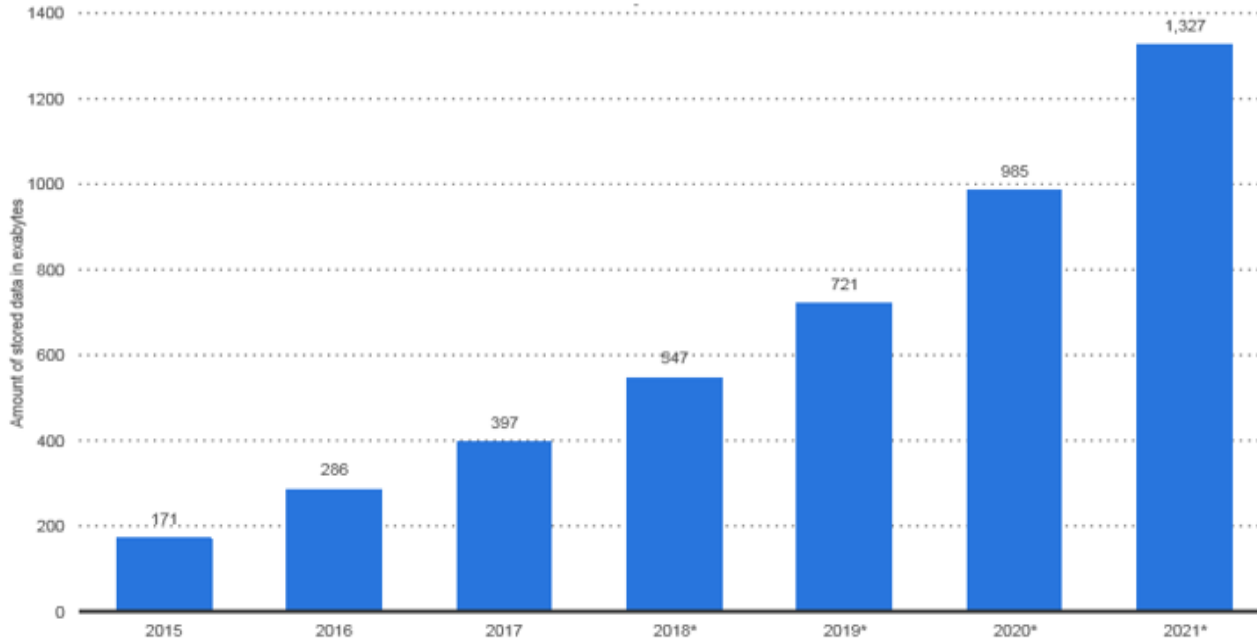
11. TECHNOLOGY LEADS TO EXPLOSIVE GROWTH IN DATA CREATION & STORAGE



SOURCE: BANK OF AMERICA MERRILL LYNCH, AUGUST 2017

Technology has increased the need for data centres

12. DATA STORAGE WILL INCREASE MORE THAN 300% BETWEEN 2017 AND 2021

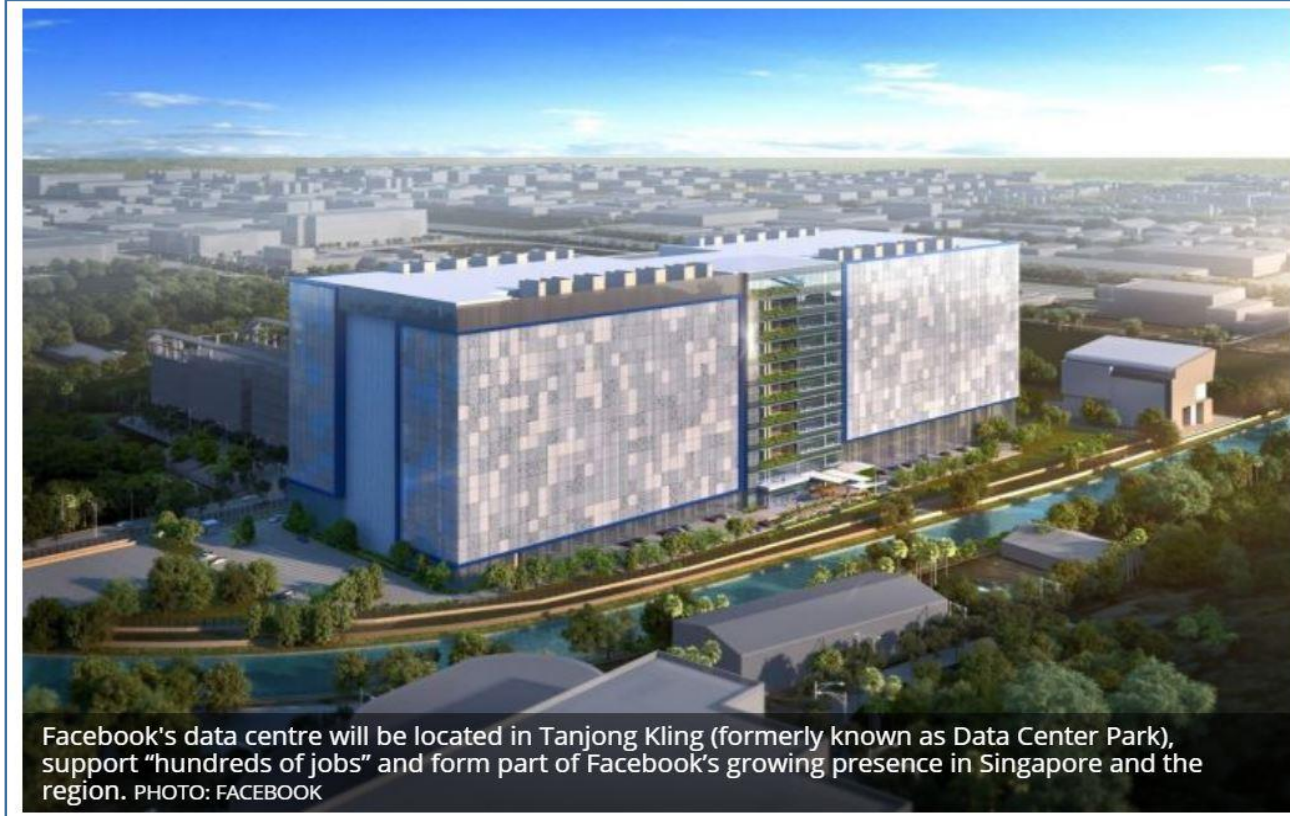


1 Exabyte
 = 1 EB = 1000⁶bytes
 = 10¹⁸bytes
 =
 1,000,000,000,000,000,000B
 = 1000 peta bytes
 = 1 million terabytes
 = **1 billion gigabytes**

SOURCE: STATISTA, DATA CENTRES 2018

Estimated amount of data to be stored in data centres worldwide from 2015 to 2021 = 1,327 exabytes

Singapore's robust infrastructure and talented workforce is attracting giants like **Facebook** to set up its SGD1.4 billion data centre here



SOURCE: THE BUSINESS TIMES, SEP 2018

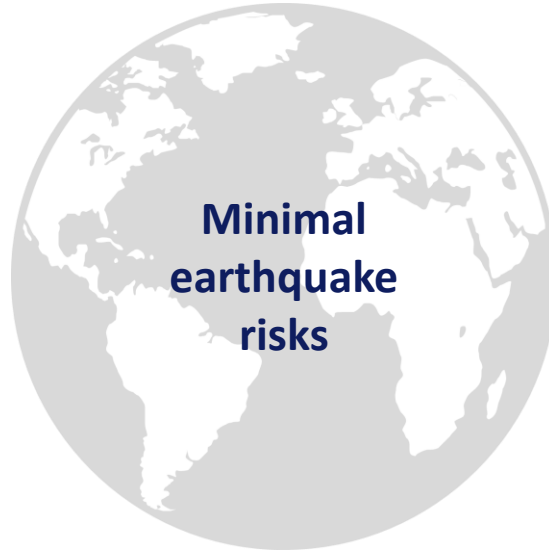
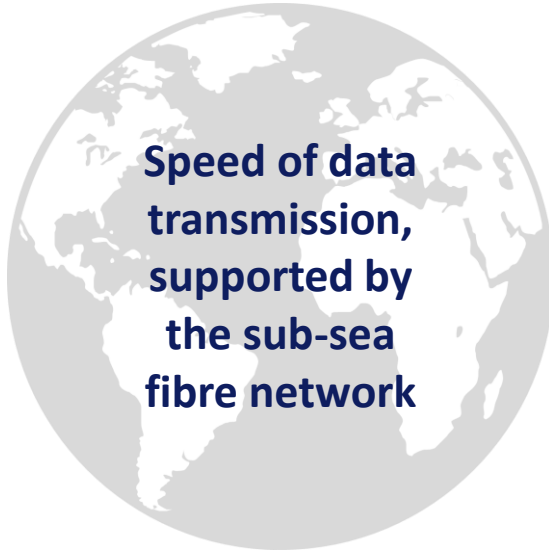
Singapore's rapid growth in users, both businesses and individuals, is attracting internet giant **Google** to build its 3rd USD350 billion data centre here



Google said the third data centre, which is expected to come online in 2020, will be built on a plot of land the size of the first and second centres combined. PHOTO: GOOGLE

SOURCE: THE STRAITS TIMES, AUG 2018

Singapore is ideal for data centres



According to Tom Duncan (CBRE), Singapore has the ideal site for “edge networking” in South East Asia. However, the heated demand for storage facilities is constrained by the limited land supply (See Singapore Business 22 Oct 2018).

Cushman & Wakefield estimated that Singapore needs to increase data centre supply by 18% by end of this year. Can more land be allocated to construct Data Centres in Singapore?

Q2:

**CAN SINGAPORE CAPITALISE ON ITS STRENGTH
TO BE THE DOMINANT LOCATION FOR DATA
CENTRES IN THE REGION?**

13. THIRD MEGATREND: CHANGING VALUES, WORK-STYLES & LIFESTYLES

- Euromonitor International identified “Changing Values as a Megatrend”.
- This megatrend may be attributable to changes in the global population profile with the entry of millennials into the workforce and technological advancements which have enabled mobile connectivity.
- This has led a to a sharing economy, flexible work-styles and casual lifestyles. We can cite many examples of changing values.

Example: millennials with laptops at Starbucks. They use Grab/Uber to share cars. They are comfortable with hot-desking and co-working spaces. Perhaps co-living too?

- With changing values, “The workplace remains under pressure to ‘evolve’”. The workplace of the future will be different.
- The outcome is a strong interest towards the “Internet of Workplace”.... Coworking Space or Flexible Workspace.

THIRD MEGATREND: CHANGING VALUES, WORK-STYLES & LIFESTYLES LEADING TO THE “INTERNET OF WORKPLACE”



To date, WeWork and JustCo have 9 and 13 co-working locations in Singapore respectively.

Will co-working space be the norm in future?

Major co-working real investment deals in Singapore and Hong Kong

SINGAPORE MAJOR DEALS

Name	District	Buildings	Size (sq ft)
Distrii	Raffles Place/New Downtown	Republic Plaza	62,000
JustCo	Marina/City Hall	Marina Square	60,000
WeWork	Raffles Place/New Downtown	71 Robinson Road	60,000
WeWork	Marina/City Hall	Funan	40,000
WeWork	Beach Road	Beach Centre	38,000
The Great Room	Marina/City Hall	Centennial Tower	36,000
Compass Offices	Raffles Place/New Downtown	Singapore Land Tower	27,000

HONG KONG MAJOR DEALS

Name	District	Buildings	Size (sq ft)
Spaces	Central	Sun House	77,000
naked Hub	Sheung Wan	Bonham Circus	55,000
Spaces	Causeway Bay	Lee Garden Three	40,000
Campfire	Causeway Bay	V Point	38,000
Spaces	Ngau Tau Kok	133 Wai Yip Street	37,500
Regus	Mong Kok	700 Nathan Road	24,000
theDesk	Causeway Bay	Leighton Centre	17,000
UR Work	Sheung Wan	One8One Queen's Road Central	15,500
naked Hub	Sheung Wan	New Street	13,000

SOURCE: COLLIERS INTERNATIONAL, APAC 2018

According to Colliers, 30% of corporate real estate investments will be in flexible workspace by 2030



**SINGAPORE COMPANIES ARE
SIGNIFICANT INVESTORS IN
REAL ESTATE**

14. SINGAPORE IS A SIGNIFICANT GLOBAL REAL ESTATE INVESTOR

- Singapore-based real estate institutional players have been investing globally, and are already significant investors in offices, hotels, logistic facilities, retail malls, and lately, data centres and student housing.
- In 2017, Singapore’s outbound property deals hit a record high.
- **Singapore was fifth largest source of capital for real estate globally (after USA, Hong Kong, China and France).**

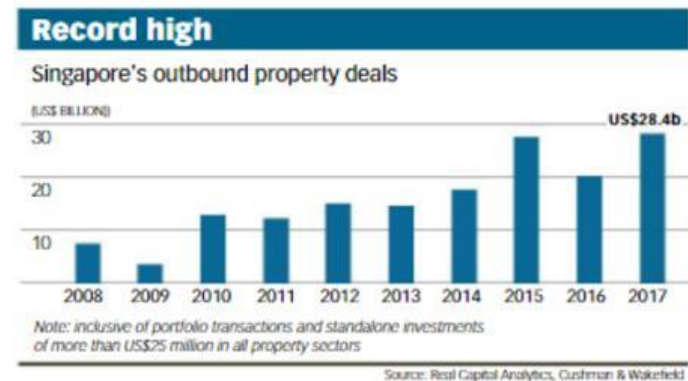
Business (<http://www.philly.com/Business>)

– Commercial Real Estate (http://www.philly.com/philly/business/real_estate/commercial)

Singapore state-backed investor snaps up University City’s Evo student apartments in latest big Philly real estate deal with overseas

Updated: JANUARY 26, 2018 — 9:35 AM EST

SOURCE: PHILLY.COM, 26 JAN 2018



SOURCE: BUSINESS TIMES, 30 JAN 2018



**SINGAPORE REAL ESTATE
INVESTMENT TRUSTS (“S-REITS”)
HAVE INCREASED THEIR
OUTWARD INVESTMENTS**



SINGAPORE'S FIRST CHINA SHOPPING MALL REIT

新加坡首支 投资于中国购物中心的房地产投资信托基金

CapitaLand Retail China Trust is a Singapore-based real estate investment trust ("REIT") established with the objective of investing on a long-term basis in a diversified portfolio of income-producing real estate used primarily for retail purposes and located in China.

凯德商用中国信托是在新加坡证券交易所上市的房地产信托基金（简称“REIT”）。凯德商用中国信托成立的宗旨是长期于投资中国的各类享有收入潜能的商用地产组合。

Mapletree Investments and Mapletree Industrial Trust Form Joint Venture to Acquire 14 Data Centres in the United States of America

24 Oct 2017

- 60:40 Joint venture between Mapletree Investments Pte Ltd and Mapletree Industrial Trust to acquire 14 data centres in the United States of America (the “United States”) for US\$750 million (S\$1,020 million¹)
- Portfolio acquisition extends Mapletree group’s footprint in the fast growing data centre sector



SMU STUDY TRIP TO MAPLETREE VIVOCITY SHANGHAI (OCT 2018)



A global hospitality REIT

FHT is the first global hotel and serviced residence trust to be listed in Singapore. It is established with the principal strategy of investing globally in income-producing real estate assets used primarily for hospitality purposes.

Secure Investments in High Quality Data Centres



Keppel DC REIT, the first data centre real estate investment trust (DC REIT) listed in Asia, invests in a diversified portfolio of income-producing real estate assets used primarily for data centre purposes, with an initial focus on Asia-Pacific and Europe.

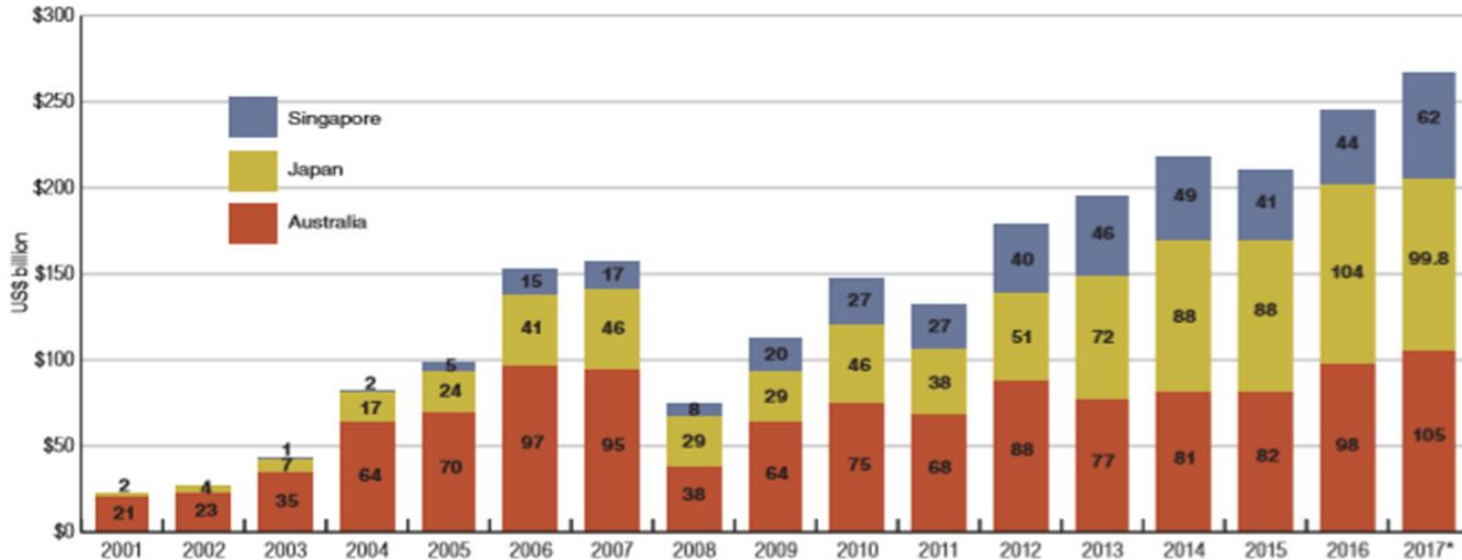
Managing a quality portfolio of 15 assets

FHT provides investors exposure to one of the largest international hospitality portfolios by number of keys. Its geographically diversified portfolio of 15 quality assets are in prime locations across 9 key cities in Asia, Australia and Europe.



Data centres may be a “box” or a facility with complex IT equipment. Would rental of IT equipment and server racks (with short life spans) create issues? Should Data Centres be financed differently?

15. MARKET CAPITALISATION OF S-REITS

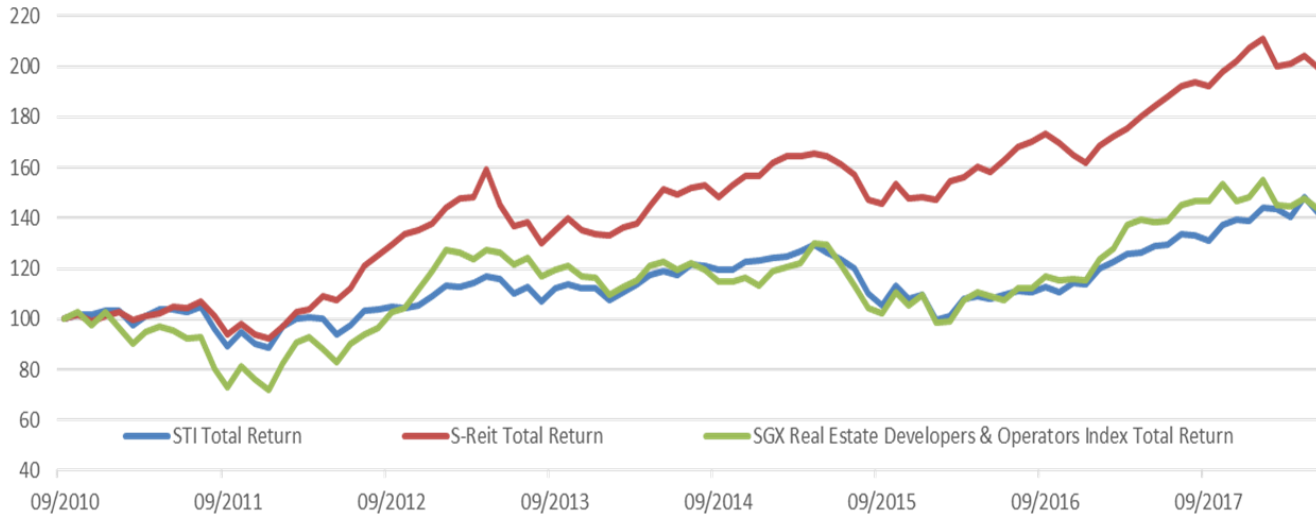


SOURCE: URBAN LAND INSTITUTE, EMERGING TRENDS IN REAL ESTATE ASIA PACIFIC 2018

- Singapore’s REIT sector has grown to be the 6th largest market globally with a market capitalisation of about US\$62 Billion
- Singapore is ranked the 3rd largest REITS market in Asia-Pacific after Japan and Australia

16. S-REITS PERFORMED BETTER THAN REAL ESTATE DEVELOPERS

- Over 8 years from Sep 2010, S-REITs have outperformed the STI and Singapore property stocks. Property stocks have performed in line with the STI.



SOURCE: SMU INVESTMENT OFFICE; BLOOMBERG, SEP 2010 TO MAY 2018

16. S-REITS BEATS EQUITY AND BONDS 2002-2017

REITs and listed real estate outperform equities and debt over the long term



SOURCE: APREA 2018

17. S-REITS HAVE HIGHEST YIELDS IN APAC

Key Metrics	Hong Kong	Singapore	Japan	Australia
Price/Book Value	0.84x	1.03x	1.35x	1.15x
Dividend Yield	3.6%	5.1%	3.9%	4.3%
Market Cap US\$Bn	31	60	114	92

SOURCE: SMU INVESTMENT OFFICE; BLOOMBERG AS OF MAY 2018:
 S&P HONG KONG REIT INDEX, FTSE ST REIT INDEX, TOKYO STOCK EXCHANGE REIT INDEX, S&P / ASX 200 A-REIT INDEX

18. S-REITS ARE IDEAL VEHICLES FOR GLOBAL REAL ESTATE INVESTMENTS

- S-REITS have tax pass-through for eligible investors
- Singapore has an excellent regulatory framework for REITS
- Singapore ranks 12th in global real estate transparency
- S-REITS provide solid medium-term returns for investors
- S-REITS give better returns compared to other asset classes
- S-REITS offer excellent stable dividend yields
- S-REITS have good assets injection at IPO and Post-IPO which are generally accretive
- S-REITS have good reputation for excellent governance



Q3:

**CAN WE ATTRACT MORE REITS TO BE LISTED
IN SINGAPORE?**

Q4:

**CAN WE ATTRACT MORE INVESTORS TO INVEST IN
S-REITS?**

Q1:
**WHAT CAN SINGAPORE DO TO PROMOTE MORE OUTWARD
REAL ESTATE INVESTMENTS?**

Q2:
**CAN SINGAPORE CAPITALISE ON ITS STRENGTH TO BECOME THE
DOMINANT DATA CENTRE LOCATION IN THE REGION?**

Q3:
**CAN WE ATTRACT MORE REITS TO BE LISTED
IN SINGAPORE?**

Q4:
CAN WE ATTRACT MORE INVESTORS TO INVEST IN S-REITS?

WHAT CAN SINGAPORE DO TO PROMOTE MORE OUTWARD REAL ESTATE INVESTMENTS?

- New “Alternative Real Estate Assets” such as Data Centres, Coworking Space Student Accommodation and Senior Housing may require innovative financing instruments.
- Singapore should promote more Private Debt Funds for real estate investments, Private Debt Funds raised US\$2.5 Billion in 2015.
- Singapore should promote more Private Equity in Real Estate (PERE) Funds to be located here. In Asia-Pacific, PERE Funds have AuM of more than US\$800 Billion.
- Peer to peer may be an upcoming trend with the millennials. Crowdfunding for real estate will grow. MAS may need to hasten the approval of guidelines.
- Singapore financial institutions should continue to innovate. Recent innovations:
 - Green Bonds issued by City Development, Frasers Property, Ho Bee Land, etc.
 - “Unconstrained Infrastructure Fund” by Morgan Stanley
 - Real Estate Funds incorporating ESG Factors
- However, there is an apparent shortage of manpower with the requisite expertise to go regional or global and into Alternative Real Estate Investments. I would propose more programmes and schemes to accelerate training and development of manpower for global real estate investments. SMU will do our part to nurture more talents for the industry.

CAN SINGAPORE CAPITALISE ON ITS STRENGTHS TO BECOME THE DOMINANT DATA CENTRE LOCATION IN THE REGION?

- More companies may outsource their servers and/or data storage.
- Data Centres are more than “boxes”. Can operators and owners of data centres be accorded better tax treatments?
- Can our Singapore companies and funds be more innovative in financing data centres?
- Would more land be made available for data centres in Singapore?
- Similar to developing a logistic hub or a financial hub, it is imperative that Singapore Urban Planners take an urgent look at the provision of suitable land for more data centres.
- Data centres have critical specifications for power supply, security as well as accessibility and connectivity.
- A multi-agency approach is needed and a high-level task force should be established to provide a strategic plan for Singapore to be a premier location for data centres.

CAN WE ATTRACT MORE REITS TO BE LISTED IN SINGAPORE?

- We will need to maintain the current tax pass-through of income received by SREITs and waiver of the stamp duties charges in the purchase of properties by SREITs. These are invaluable privileges.
- Can there be a clearer statement to provide certainty that these concessions are permanently available, or for the next 20 number of years (like Cayman Islands) rather than approval of concessions every 5 years?
- We must do the utmost to continue with excellent management practices and governance to sustain the excellent reputation of Singapore as a premier centre for REITS.
- We should consider relaxing the leverage ceiling to allow REITS with better credit standing to borrow beyond 45%.
- We should entice more overseas real estate owners to establish REITS to be listed in Singapore. Are there impediment or high compliance costs which discourage REITs to be listed in Singapore?
- We should promote more REITs to be listed in Singapore to enhance the vibrancy of SGX.

CAN WE ATTRACT MORE INVESTORS TO INVEST IN S-REITS?

- REITS are well-liked by many investors, especially Pension Funds and Retirees, as REITS offer predictable and consistent dividend distributions.
- To attract a larger market of investors, S-REITS should diversify by investing in more cities, across more assets and sectors to offer diversified portfolios which will result in lower portfolio volatility for investors. Smaller REITS should also merge to have scale.
- S-REITS may also attract a new market segment of investors by incorporating ESG factors into the portfolios. This will appeal to potential investors who favour doing well and doing good.
- S-REITS Managers should closely collaborate with Private Banks to attract more funds from High Net Worth Individuals. REITS are a substitute for physical real estate; REITS are liked by Asians who switch from physical real estate to REITS because of the availability of liquidity.
- Funds operating in Singapore can take advantage of the ASEAN CIS Fund Passport to attract more investors.

19. THE TWO REGIONAL FUNDS PASSPORTS

- In Aug 2014, the ASEAN Collective Investment Scheme (CIS) went live.
https://www.asiaasset.com/news/ASEANs_CIS_fund_passport_scheme_goes_live2708.aspx
- The ASEAN CIS currently has 3 participating nations: Singapore, Malaysia and Thailand. It allows eligible fund managers operating in the 3 nations to distribute fund products across borders to retail investors via a “streamlined process”.
- Meanwhile, the Asia Region Funds Passport (ARFP) will be launched on 1 February 2019.
<http://fundspassport.apec.org/>
- Japan, Thailand and Australia have completed preparations for implementation. Korea and New Zealand are preparing to participate. (Singapore is observing but has not officially signed up)
- Once implemented, the ARFP will provide a multilateral framework that facilitates the cross-border marketing of managed funds among the participating economies in the Asia region.



20. SINGAPORE VARIABLE CAPITAL COMPANY (SVCC)

- Singapore is enacting the Singapore Variable Capital Company (SVCC) which will complement the ASEAN CIS.
- PwC has termed the SVCC “the game changer for asset management in Asia-Pacific”. <https://www.pwc.com/sg/en/asset-management/assets/svacc/svacc-briefing-paper.pdf>
- The SVCC can only be used as a vehicle under the Collective Investment Scheme (CIS).
- SVCC is a corporate structure, which if successful, will add to the vibrancy and diversity of the fund management industry in Singapore. Tax optimisation is made possible because SVCCs can avail themselves to the US 'check-the-box' election.
- However, SVCC is currently not applicable to real estate funds, since a real estate fund is exempt from the licensed Fund Manager framework of MAS.



We need to explore how key features of the SVCC framework can be made useful for real estate funds

SUMMARY

- The global investable real estate universe has seen strong growth propelled by global megatrends.
- Singapore's real estate institutional players have been investing globally.
- Singapore's REIT sector has grown to be sixth largest market globally and is the third largest market in Asia-Pacific.
- Going forward, Singapore can, and should, play an even larger role, regionally and globally.
- Innovative financing vehicles would be needed for enhanced investing in "Alternative Real Estate Assets". Private Debt and Private Equity Funds can be further promoted.
- We should work towards listing more SREITS in Singapore and attracting more funds to be invested in SREITS.
- We should facilitate the growth of data centres in Singapore while searching for opportunities to invest globally.
- Talent development and regulatory updates are crucial and needed to further develop Singapore as a premier financial centre for global real estate investments.

THANK YOU

