Transforming Yangon
the Heart of Myanmar
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>2</td>
</tr>
<tr>
<td>By Chief Minister, Yangon Region</td>
<td>2</td>
</tr>
<tr>
<td>A message from our Managing Partner</td>
<td>6</td>
</tr>
<tr>
<td>Introduction to Transforming Yangon</td>
<td>8</td>
</tr>
<tr>
<td>1. Myanmar</td>
<td>10</td>
</tr>
<tr>
<td>2. Yangon Region</td>
<td>13</td>
</tr>
<tr>
<td>3. Future Yangon</td>
<td>24</td>
</tr>
<tr>
<td>4. Building the future</td>
<td>35</td>
</tr>
<tr>
<td>5. Creating a sustainable environment for growth</td>
<td>74</td>
</tr>
<tr>
<td>Contact us</td>
<td>84</td>
</tr>
</tbody>
</table>
In this publication, PricewaterhouseCoopers defines the future of Yangon’s infrastructure story, bringing together the visions of the Union Government and the Yangon Region Government (YRG) and the various sectoral plans that will over the long term create a vibrant economic hub in ASEAN. While Yangon Region continues to face teething challenges common in any developing economies, steps have been taken to liberalise and transform our economy, create a more liveable and efficient Yangon City while boosting development activities across the Region. Sustainability, job creation, industrial development, trade connectivity and the lives of its citizens are at the core of our development plans.

The Yangon Region offers significant growth opportunities as it transforms into a vibrant regional economic hub, contributing to the development and growth of Myanmar. I hope this publication will assist foreign investors gain a better understanding of the Region’s developmental potential, and the wide ranging investment opportunities across multiple infrastructure sectors. The YRG hopes to increase engagement and collaborate more closely with the private sector to help transform Yangon Region into a vibrant, safe, sustainable economic centre of Myanmar.

YRG’s economic vision is focused on the following four primary areas to drive sustainable economic growth while creating a vibrant, liveable city where talents are attracted to: industrial development, trade and logistics, urban public transport and sustainable urban development.

1. **Industrial Development**

   Industrial development to create employment for our young work force and to uplift the living standards of our citizens is the key priority of this government. The Thilawa Special Economic Zone (Thilawa SEZ) has attracted investments of over $1.6 billion as of March 2019. It is estimated that 200,000 jobs will be created once it is in full operations. YRG is planning to upgrade its 29 existing industrial zones and further develop another 11 new industrial parks across the Yangon Region.

   New Yangon City (NYC) is a 20,000 acre development to the west of Central Yangon across from Kyee Myin Dain. NYC is phase 1 of a broader development vision that will stretch down to the Yangon Special Economic Zone (Yangon SEZ) and the Deep Sea Port at Elephant Point on the Gulf of Martaban. NYC is envisaged to be delivered by 2020, and will comprise new villages and townships, industrial zones, power plant and power distribution network, water and sewerage treatment facilities, and network of artery roads and two bridges connecting NYC to Central Yangon.

   Phase 2 of the vision would connect Dala Township to the Deep Sea Port at Elephant Point, including the Yangon SEZ. This development will be up to 67,500 acres in size and comprise industrial zones, a new international airport, the Deep Sea Port, commercial and residential developments, and green, open spaces.
The NYC and Yangon SEZ are respectively mid and long term development initiatives that will greatly add to the capacity and scale of Yangon Region’s industrial base with the aim of creating 2 million jobs. Together, they will offer investment opportunities across industry, services, logistics, real estate, transportation and utilities.

2. Trade and Logistics
Trade and logistics are core to the development of the Yangon Region and key enablers for the growth of its manufacturing and industrial base. Yangon Region is ideally placed to act as the primary logistics node connecting the Greater Mekong region to the Indian Ocean. Further, 90% of all import and export traffic to and from the Myanmar hinterland travels through Yangon.

The Yangon Port is integral to the Region’s economy, but as a river port located at the fringes of Central Yangon, the ingress and egress routes create significant congestion within the downtown areas, while occupying prime riverfront real estate. Further, although port capacity is being augmented through developments at Thilawa Port and Ngwe Pin Le, there are limits to the extent of growth available.

Therefore, over the longer term, as part of the Yangon SEZ, the new Deep Sea Port at Elephant Point is planned. This offers a real ability to grow the flow of goods to and from the Yangon Region and Myanmar, alleviating traffic congestion within Yangon City, while creating additional redevelopment opportunities of the riverfront sites. An international airport adjacent to the Deep Sea Port is also proposed, while road networks will connect the Deep Sea Port and Yangon SEZ to the Yangon City.

3. Urban Public Transport
As Yangon Region’s population and economy grows, our Urban Transportation Plan continues to develop. We have developed a sustainable, integrated public transport system plan that will be affordable and allow the easy transportation of goods and people to and from regional economic centres.

This comprehensive integrated public transport masterplan will deliver a public transport system for Yangon’s population and businesses with easier, more efficient and cheaper modes of transport. We have abolished the All Bus Line Control Committee bus system. In its place, YRG provides a new Yangon Bus Service (YBS) with modern buses, supervised by the Yangon Regional Transport Authority (YRTA). New taxi services are also being regulated and licensed to enhance service standards.

In the longer term, we aim to develop an elevated Mass Rapid Transit system (MRT) which can be integrated with mixed used real estate developments, bus and train interchanges. The Yangon circular and sub-urban rail systems are also being upgraded to provide an efficient and reliable, cost effective public transport utility for our citizens.
4. Sustainable Urban Development

Sustainable urban development remains critical to the Yangon Region as more people migrate to Yangon City and the Region in search of economic enhancement to their lives through better healthcare, housing, education and job prospects. Our citizens deserve a vibrant working city and YRG is intent on providing this. As the urban population grows, more pressure will be placed on our transport networks, housing, commercial property and municipal services like sewerage and sanitation, waste management, potable water and power.

NYC is key to the next phase of Yangon City’s development. It will relieve pressure on Central Yangon, allowing it to be redeveloped and rejuvenated, and its century-old infrastructure upgraded while preserving the charm of its historically and architecturally significant buildings. As a greenfield site, NYC provides the perfect canvas for a modern industrial zone to be planned and developed from ground up.

With rapid urbanisation and economic growth, the housing needs of the Yangon Region are significant. Between 75,000 and 100,000 new units are required each year. We have in place plans to deliver at least 180,000 affordable housing units by 2021, and have embarked on a number of projects to date – two significant examples are the 183 acre Dagon Seikkan Township development for housing of government employees, and the 31.95 acre Yankin Housing Redevelopment Project.

Urbanisation and growth also put significant strain on our utilities. The demand for power, water and sanitation currently exceeds what can be supplied by our existing facilities. By 2022 we need to double electricity supply to approximately 6,000MW, to satisfy an additional demand of at least 3,000MW. The increased power generation capacity will be achieved through gas, solar, wind and waste-to-energy generation, avoiding the use of coal. Further, we aim to improve the provision of water, sewerage and sanitation services in the short term, reduce non-revenue water, and increase water availability services from 13 hours per day currently to 24 hours per day by 2025.
As you may know, the Union Government has announced the Myanmar Sustainable Development Plan and the creation of Project Bank which is a databank of priority and strategic projects in various sectors across all of Myanmar. YRG has initiated our own Project Bank with 80 projects identified across the Yangon Region. PricewaterhouseCoopers has been supporting the YRG and my office to obtain project information, apply pre-determined evaluation criteria to evaluate each project, its stage of development, economic importance and development impact as well as possible procurement timeline.

Project Bank will serve as the master list of infrastructure projects across the Yangon Region for the coming years. Projects will be procured using globally recognised commercial structures with funding from various sources including budgets allocated from Union Government and YRG, multi-lateral development banks, overseas development assistance loan packages and, very importantly, private sector funding resources.

In conclusion, I hope this publication will help you gain an initial understanding of the YRG’s plans and identify attractive investment opportunities. There are many infrastructure opportunities that will require both local and international expertise, investment and services to transform the Yangon Region economy, and deliver this Vision. YRG will be approaching the private sector to bid on economically viable, bankable projects and we sincerely hope and look forward to you partnering with the YRG and our local companies as we embark on our growth journey.

**U Phyo Min Thein**  
Chief Minister  
Yangon Region Government
PwC was the first Big 4 firm to return to Myanmar in 2012. Over the past seven years, we have had the privilege of witnessing, from the ringside, the breath-taking transformation of the Yangon Region and have been advisors to some of the most significant merger and acquisition transactions in the country.

I remember opening our office in 2012 when Yangon City had only a couple of tall office buildings, and feeling relieved when we managed to clinch a small office space in the newer of the two buildings, despite having to fork out a princely rental of USD 70 psm. Today, we are spoiled for choice. The office building that we are about to move into will hold its own in any major city, and we are paying substantially less in rent. You would also no doubt have heard stories about how mobile phone SIM cards cost hundreds of US dollars in those early days, and that there was no data roaming, only SMS for overseas visitors. We were then all experts in seeking out Wi-Fi from hotels and restaurants, and personal hotspots from generous friends with local lines.

Most first time visitors that I host in Yangon are surprised by how “modern” and “developed” it is. It is not difficult to understand why. Yangon today is much more advanced than Beijing or Hanoi was in the mid-nineties, which was about the same length of time from the opening up of China and Vietnam in the late eighties. Both these countries are held up as success stories. However, when we compare the progress made by Myanmar, the yardstick we measure it against should not be the Vietnam or China of today, but where they were when they were a similar number years after the opening up of their economies.

PwC is today the largest international professional services firm in Myanmar. Our global purpose is to build trust in society and solve important problems. In Myanmar, we deliver this by creating value for our clients and the society along the following three themes:

1. We help foreign investors invest in the country, build strong local presence in the market and create value;

2. We help local enterprises transform their businesses, raise capital and compete in a more globalised economy; and

3. We advise government, multilaterals and the private sector on infrastructure development and investments.
From the get-go in 2012, we brought our regional network to bear on Myanmar so that we can deliver service levels consistent with the best that PwC offers globally. A case in point is our infrastructure practice. Not only are we the only firm with a team of infrastructure specialists on the ground in Yangon, we also tap the expertise of our Singapore firm to train our local talent and lead the delivery of our projects. We are therefore able to boast of a bench that includes several specialists with decades of international experience in infrastructure financing, greenfield capital project management, brownfield mergers and acquisitions, public-private partnership and corporatisation across various sectors from power and water utilities, rail and road transport, air and sea ports, industrial zones to social infrastructure.

We have specially published “Transforming Yangon, the Heart of Myanmar” in connection with the Yangon Investment Forum 2019. In this publication, we set out a summary of the major infrastructure developments in the Yangon Region and help articulate the Yangon Region Government’s bold vision and ambition for the Region. For a more comprehensive understanding of the opportunities in Myanmar and the transformation journey the country has undertaken thus far, this should be read in conjunction with PwC’s Myanmar Business Guide, which is into its sixth edition now. Both of these, and other PwC thought leadership publications on Myanmar, can be accessed at https://www.pwc.com/mm/en/.

We hope our publications will help you better understand the country and the vast opportunities Myanmar has to offer. Please do not hesitate to reach out to myself or any member of my team if we can be of any assistance.

Ong Chao Choon  
Managing Partner  
PwC Myanmar
Introduction to Transforming Yangon

Myanmar is handicapped by many decades of under investment in its infrastructure stock. Recent economic growth, high rates of urbanisation and a need to modernise its infrastructure require significant levels of investment into the Yangon Region’s infrastructure if it is to continue its current growth trajectory.

“Transforming Yangon, the Heart of Myanmar” has been prepared and launched to provide a roadmap of the scale and opportunity for investors, financiers, constructors, operators and advisors that may have an interest in the Yangon Region infrastructure market. An enormous amount of work, by the Union Government and the Yangon Region Government (YRG), has gone into defining the roadmap for Yangon Region’s infrastructure program. We hope this document offers readers a comprehensive picture of Yangon’s future.

Yangon’s strategic position as the country’s financial, commercial and logistic centre plays a leading role in attracting businesses and investments into Myanmar, and will continue to do so into the future. YRG intends to continue to leverage on the city’s strengths, geographical advantage and youthful workforce to transform the Region into the economic heartland of Myanmar, and a crucial node in the Greater Mekong Region.

YRG has set its sights on transforming Yangon City into a vibrant, safe, sustainable and smart city by 2030, while growing the economic footprint of the Yangon Region through a number of large scale, revolutionary infrastructure investments.

Following the transition to a civilian led government headed by Daw Aung San Suu Kyi, the country has continued its economic and market transformation as more business sectors are liberalised and new policies introduced aimed at attracting foreign direct investment, providing certainty and better protection to foreign investors and enhancing growth. The infrastructure investments proposed by YRG in the future cover all sectors from ports and airports to power and utilities, municipal services, industrial zones, urban transport solutions, housing and healthcare and education.

In its growth journey, YRG will be taking a proactive approach to align all of its policies and development plans with the Myanmar Sustainable Development Plan (MSDP). As Yangon strives to become more connected to the global and regional economies, it aims to improve the quality of life of its people, offering better services, improved job prospects and sustainable infrastructure to grow its economy.
YRG’s Project Bank will serve as the master list of infrastructure projects across the Yangon Region for the coming years. The aim is to have a clear, transparent and prioritised approach to procure these projects using internationally recognised commercial structures that are economically viable and bankable.

While the road to achieving the ambitious program of investment and change will have its fair share of challenges and obstacles, YRG has done much already to lay the foundations for success. Daw Aung San Suu Kyi in one of her recent speeches at the 43rd Singapore Lectures held in August 2018 in Singapore said that “…We have many challenges to face, many weaknesses that we must address. But we have confidence, confidence in the abilities of our people, and the capability of our people to grow into these challenges.”

The positive and can-do attitude of the Myanmar leaders provides hope for a new and brighter future for the country and Yangon Region, while offering very significant growth opportunities for both local and international investors.

Mark Rathbone
PwC’s Asia Pacific Infrastructure Leader
Myanmar is said to be the last frontier market in Asia, and Asia’s next rising star. Myanmar is located at the heart of Asia, with China to its north, India on its west and the rest of Southeast Asian countries on its south and east. On a combined basis, these countries hold half of the world’s population and are the fastest growing economies in the world. This strategic location will play a pivotal role in Myanmar’s future.

As a young and dynamic country, Myanmar stands on the cusp of a major transformation - with a large population of 54 million, sizeable low-cost workforce, its key strategic location and abundance of natural resources, the country has significant development and growth potential. The significant political and economic reforms that have taken place since 2011 have opened up Myanmar to the world and positioned it as one of the fastest growing economies not only in Southeast Asia, but also globally.

The country experienced positive Gross Domestic Product (GDP) growth of 6.8% in 2018 and the Asian Development Bank (ADB) expects this growth to continue for the coming year. Growth of 7.3% is expected in 2021. The country attracted foreign direct investment (FDI) of USD 5.7 billion in 2017-2018, driven mainly by the manufacturing, real estate and transport & communication sectors.

To boost foreign investments in the country, the Government have introduced investment-friendly measures - the introduction of the Myanmar Companies Law, liberalisations in the retail, wholesale and education sectors and contract renewals with oil majors in the upstream sector are some examples.
**Regulatory Reforms**

- **January 2018**: 2019 Budget emphasises currency stability, increase revenue collections, spending on electricity, energy, education, health and social services.
- **May 2018**: Liberalisation of retail and wholesale industry, First credit agency set up.
- **March 2018**: Launch of New Yangon City Project.
- **April 2018**: Liberalisation of private education sector.
- **June 2018**: Significantly increased number of permits granted to privately-owned postal companies.
- **August 2018**: Liberalisation of export financing services.
- **September 2018**: 2019 Budget emphasises currency stability, increase revenue collections, spending on electricity, energy, education, health and social services.
- **November 2018**: Ministry of Investment and Foreign Economic Relations formed, Liberalisation of local lending by banks, Significant progress made on Kyaukphyu SEZ negotiation.
- **December 2018**: Launch of Mandalay Resort City Project.

**Infrastructure project announcements**

- **February 2019**: Central Bank allows up to 35% foreign equity investment in local banks, Launch of Eco Green City Project, Launch of Ring Road Project.
- **March 2018**: Launch of New Yangon City Project.
- **November 2018**: Launch of Greater Yangon Water Supply Improvement Project.
- **January 2019**: Liberalisation of insurance sector.
- **June 2018**: Significantly increased number of permits granted to privately-owned postal companies.
- **January 2019**: Launch of Myanmar-China high-speed railway Project, Launch of Mandalay Resort City Project.
Yangon Region
Yangon Region is the economic centre of Myanmar, located in the southern part of the country and home to 7.4 million people. Yangon Region accounted for 24% of the country’s Gross Domestic Product (GDP) in 2017. It is the international gateway and commercial hub of Myanmar and the key to unlocking the nation’s untapped potential.

The City of Yangon is located in the south of the Yangon Region. It has the potential to establish itself as a vital economic and geographic entity both within Myanmar and beyond. The Union Government and the Yangon Region Government (YRG) recognise that infrastructure plays a critical role in the development of their economies and are therefore focused on developing needed infrastructure to support growth.
The Yangon Region comprises 45 townships, and spans 10,277 square kilometers, while Yangon City comprises 33 townships within the Yangon Region. The population of the Yangon Region is approaching 7.4 million.
The City of Yangon is the most densely populated part of Yangon Region with an estimated population of 5.2 million.
Governance

The Yangon Region Government (YRG) is formed by a partially elected parliament (Hluttaw) and led by a Chief Minister. The cabinet is made up of the Chief Minister, 2 Region Ministers and Region Advocate and Region Auditor.

As per the Constitution, The Yangon Region Hluttaw is formed by two elected members per township (90 MPs- 2 per township for 45 townships), two MPs for “national races” (Kayin and Rakhine) and the appointed military representatives which comprise one quarter of the Hluttaw (31 MPs).

The Union President appoints the Chief Minister from amongst the elected or unelected Hluttaw members, which is subject to confirmation by the Hluttaw. U Phyo Min Thein was elected to a parliamentary seat in the Yangon Region Hluttaw from Hlegu Township Constituency No. 2 in the 2015 general election and appointed as Chief Minister for the Yangon Region on 30 March 2016.

The Chief Minister selects the Region Ministers from among Hluttaw representatives or other candidates, and these are assigned portfolios by the President.

In 2013, the Yangon Region Hluttaw adopted the 2013 Yangon City Municipal Law, which holds the Yangon City Development Committee (YCDC) and the Yangon City Mayor accountable to the legislature, including its budgetary power.
Since 5 April 2016, YCDC, the administrative body of Yangon City, covering the 33 townships of Yangon, has been led by the Yangon Mayor, U Maung Maung Soe. YCDC is mainly responsible for city planning, land administration, regulation of construction sites, and the construction and maintenance of public spaces, utilities and infrastructure. Under YCDC, there are 20 departments and income-generating enterprises.

At the request of State Counsellor Daw Aung San Suu Kyi in late 2016, the Yangon Mayor submitted the draft YCDC law to the Yangon Regional Parliament in February 2018. The law came into effect in June 2018 and replaces the existing 1922 City of Rangoon Municipal Act and supplements the 2013 YCDC Law. The YCDC Law was prepared by YCDC in collaboration with 31 government-appointment experts and 9 members of Hluttaw. It covers 32 sectors with 31 chapters and 337 provisions with the underlying purposes of developing Yangon Region, strengthening the Region’s institutions, increasing its capacity and accelerating the achievement of its growth goals. Along with the implementation of the new law YCDC is exploring corporatisation of some of its entities.

YRG Cabinet

<table>
<thead>
<tr>
<th>Name</th>
<th>Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>U Phyo Min Thein</td>
<td>Chief Minister</td>
</tr>
<tr>
<td>U Maung Maung Soe</td>
<td>Mayor/Minister of Municipal Affairs</td>
</tr>
<tr>
<td>Col. Aung Soe Moe</td>
<td>Minister of Security and Border Affairs</td>
</tr>
<tr>
<td>U Myint Thaung</td>
<td>Minister of Planning and Finance</td>
</tr>
<tr>
<td>U Han Tun</td>
<td>Minister of Agriculture, Livestock, Forest and Energy</td>
</tr>
<tr>
<td>Daw Nilar Kyaw</td>
<td>Minister of Electricity, Industry, Road and Communication</td>
</tr>
<tr>
<td>U Naing Ngan Lin</td>
<td>Minister of Social Affairs</td>
</tr>
<tr>
<td>Naw Pan Thinzar Myo</td>
<td>Minister of Kayin Ethnic Affairs</td>
</tr>
<tr>
<td>U Zaw Aye Maung</td>
<td>Minister of Rakhine Ethnic Affairs</td>
</tr>
<tr>
<td>Daw Khin Myo Kyi</td>
<td>Region Advocate</td>
</tr>
<tr>
<td>Daw Khin Than Hla</td>
<td>Region Auditor</td>
</tr>
</tbody>
</table>

Source: YRG website
Basic facts of Yangon in relation to Myanmar

<table>
<thead>
<tr>
<th>Category</th>
<th>Union</th>
<th>Yangon Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size (km²)*</td>
<td>656,577</td>
<td>10,277</td>
</tr>
<tr>
<td>Total Population*</td>
<td>51.5 million</td>
<td>7.4 million</td>
</tr>
<tr>
<td>Population Density (per km²)*</td>
<td>76</td>
<td>716</td>
</tr>
<tr>
<td>Population Male*</td>
<td>24,824,586 (48.2%)</td>
<td>3,516,403 (47.8%)</td>
</tr>
<tr>
<td>Population Female*</td>
<td>26,661,667 (51.8%)</td>
<td>3,844,300 (52.2%)</td>
</tr>
<tr>
<td>Urban Population*</td>
<td>14,877,943 (29.6%)</td>
<td>5,160,512 (70.1%)</td>
</tr>
<tr>
<td>Percentage of Urban Household Ownership*</td>
<td>66.0</td>
<td>56.7</td>
</tr>
<tr>
<td>Percentage of Population by Age Group*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment to Population Ratio (15-64) as of 2015 (%)</td>
<td>64.2</td>
<td>58.2</td>
</tr>
<tr>
<td>Number of Townships/Sub-Townships*</td>
<td>413</td>
<td>46</td>
</tr>
<tr>
<td>GDP (in USD billion, as of FY 2016/17)**</td>
<td>58.5</td>
<td>10.7</td>
</tr>
<tr>
<td>GDP per Capita (in USD, as of FY 2015/16)**</td>
<td>1,350.5</td>
<td>2,103.5</td>
</tr>
<tr>
<td>Annual GDP Growth Rate, as of FY 2016/17</td>
<td>5.9%</td>
<td>8.5%</td>
</tr>
<tr>
<td>Consumer Price Index (%) as of FY 2016/17**</td>
<td>6.8</td>
<td>5.1</td>
</tr>
<tr>
<td>Number of Bank Branches*** as of 2016</td>
<td>1,890 with 3.8 branches per 100,000 people</td>
<td>471 with 6.4 branches per 100,000 people</td>
</tr>
<tr>
<td>Number of Beds in Public Hospitals**</td>
<td>46,060 with 89.4 beds per 100,000 people</td>
<td>10,478 with 141.6 beds per 100,000 people</td>
</tr>
<tr>
<td>Number of Beds in Private Hospitals**</td>
<td>9,198 with 17.9 beds per 100,000 people</td>
<td>3,632 with 49.1 beds per 100,000 people</td>
</tr>
<tr>
<td>Number of Private Clinics**</td>
<td>3,759 with 7.2 clinics per 100,000 people</td>
<td>1,165 with 15.7 clinics per 100,000 people</td>
</tr>
<tr>
<td>Adult Literacy Rate*</td>
<td>89.5%</td>
<td>96.6%</td>
</tr>
</tbody>
</table>

* Overview of the Results of the 2014 Population and Housing Census, Myanmar, December 2017
** Myanmar Statistical Yearbook 2017
*** GIZ 2016
On a national level, Myanmar’s GDP grew at a compound annual growth rate (CAGR) of between 5.9% and 8.4% from 2011 to 2017, whilst Yangon’s GDP grew at a CAGR between 8.4% and 10.0% over the same period. Yangon Region accounts for about 24% of the country’s GDP.

Yangon Region enjoys a positive macroeconomic outlook supported by a GDP per capita that is approximately 50% greater than the national average (in 2016 USD 2,104 compared to the national per capita GDP of USD 1,351). This compares favourably to other ASEAN countries when considering the nascent nature of Yangon Region’s economy.

According to the Directorate of Investment and Company Administration (DICA) and the Yangon Region Investment Committee, a significant proportion of the country’s foreign and local investments have gone into Yangon Region. Over the past three years, total approved FDI into Yangon Region was USD 9.5 billion, accounting for more than a third of the total approved FDI of USD 25.4 billion in the country.

FDI growth has declined over the past two years in part due to the transition period arising from the change of government and distractions resulting from the crisis in northern Rakhine. However, even at these reduced levels, FDI into Myanmar as a percentage of GDP is still one of the highest amongst the Southeast Asian countries.
Yangon Region

Yangon City’s increasingly important status as a developing city is propelled by a number of drivers’ including its strategic location, rising levels of urbanisation, large low cost workforce, increasing consumerism driven by a rising middle class and strong regulatory reforms. These factors all play a critical role making the city an attractive destination for investment and development.

Strategic Location:
Myanmar is strategically positioned between India, China and Southeast Asia, with access to both the Bay of Bengal and the Andaman Sea. China and India are expanding their share of global GDP (Purchasing Power Parity, PPP) from 26.41% today to 57.5% in 2030. Myanmar, and Yangon Region, are at the cross roads of these economic powers and are well positioned to benefit from the increasing trade and cross border investments from India’s Act East policy, China’s Belt and Road Initiative (BRI) and the broader ASEAN Economic Community connectivity agenda.

Yangon Region is one of the key nodes on the China Indochina Peninsula Corridor (CICPC) - hence a vital link for road networks in the Greater Mekong Sub-region.

Yangon Region is a trade and logistics hub for the country. It is home to the country’s main air and sea ports accounting for close to 90% of the country’s trade and linked by road and rail networks to the rest the country.

Yangon City serves as the country’s financial centre. It is the location of the headquarters of all of the country’s major banks and financial institutions as well as the newly established stock exchange.
Urbanisation
Yangon Region is the destination of choice for citizens moving from rural regions. Compared to the next largest urban centres, Nay Pyi Taw and Mandalay, which have a population of only 1.1 and 1.7 million respectively, Yangon Region’s significantly larger population of 7.4 million renders it the most suitable city to lead Myanmar’s urbanisation. To control future urban expansion, YRG has plans to decentralise urban centres in Yangon Region by developing the outer Central Business District (CBD) zones.

Since opening up its economy in 2011, urbanisation in the Yangon Region has grown to a point where 70.1% of the population is now defined as ‘urban’, far exceeding the nationwide percentage (30% in 2018).

Urbanisation, if managed correctly, could contribute to Yangon City becoming a leading regional city. Urbanisation enhances economic growth; improves labour productivity through higher rates of education and availability of work; and fosters an innovative environment.

Large Workforce
Yangon Region’s population is comprised of a largely young, relatively well educated, labour force which is expected to grow to 10 million by 2035. Over 70% of Yangon Region’s population is between the ages of 15 and 64, while only 5% are above the age of 65.

Wages in Myanmar remain highly competitive relative to most other countries in East and South East Asia. A world Bank study shows that the minimum wages in Myanmar is approx. USD 81 per month, compared to approx. USD 250 per month in Indonesia, USD 235 per month in Thailand and USD 172 per month in Vietnam.

New, younger and wealthier consumer base
Yangon Region’s fast-growing domestic consumer base, fuelled by urbanisation, a young population, growing income levels and rising middle class will further act as a driver of economic growth.

Income advancement and growth in consumption habits among Yangon Region’s large, young population is driving foreign and local companies to consider investing in Yangon’s untapped consumer base. Yangon Region’s high rate of FDI coupled with recent economic and political reforms have led to improved employment opportunities, faster growth and increasing levels of disposable income. Ongoing expansion of the services and manufacturing sectors will further serve to increase consumerism and spending power, leading to vast opportunities in the fast-moving consumer goods sector and other service industries.
**Regulatory change**

Foreign players can deliver solutions only if regulations and government policies make it easy to do business. Whilst Myanmar ranked 171 out of 190 economies in the 2018 World Bank’s Ease of Doing Business index, the government is aiming for a position in the top 100 by 2020, by easing permit application processes through the new MCL, simplifying measures for tax payments and simplifying the time, cost and reliability of electricity.

Yangon Region’s progression towards middle-class status has been driven by a significant number of regulatory and legislative reforms. Most recently, the 2017 MCL replaced its 1914 predecessor with the aim of creating an enhanced operating environment for investors, thereby attracting more capital. The DICA’s successful collaboration with the ADB in drafting the amendments has already led to significant improvements in corporate governance in Myanmar by creating clear, consistent and transparent regulations with enhanced accountability.

The regulatory environment in Myanmar has further improved since October 2016, when the Government passed the Myanmar Investment Law (MIL). The MIL was designed to stimulate and facilitate foreign and domestic investment in the economy, and to provide a more investor-friendly environment, a level playing field and an eased approval process.

**Fiscal strength**

Yangon Region’s robust workforce, low cost wages, improving regulatory environment and increasing investments are not the only elements that render it a strong market for future growth. Its lower levels of debt also help it weather volatility in global markets and differentiate it from other investment destinations. Myanmar enjoyed low government debt in 2017 (36.75% of GDP), lower than the average for emerging markets worldwide (47%), and markedly lower than G7 nations (120%).

**Transformation of the Yangon Region**

Liberalisation has had a remarkable impact on Yangon Region’s trading and talent market. Greater employment opportunities beyond the agriculture sector now appeal to the Region’s population and this has a direct benefit on local and foreign companies, due to the gradual emergence of a diverse and talented labour pool. According to a recent government survey, up to 7% of the population has moved within the country in the last five years with domestic migration centring on Yangon. The gradual, ongoing move away from the primary sectors towards industry and services, may mark the start of a structural conversion from an agrarian-based economy towards a more industry and service-based economy.

High levels of FDI have brought a surge of new jobs and this has led to greater disposable income for Yangon’s residents. Connectivity – both mobile and broadband – and a digital-hungry population is supporting improved education standards. Whilst Yangon still expects to undergo significant development, in the years since liberalisation, Yangon has become a more attractive city to live, work and settle in. Better conditions in Yangon may also encourage the return of some of the 3.5 million Myanmar diaspora working abroad, many of whom could provide diverse talent if they returned home at the enticement of improved working conditions and opportunities.

However, the government acknowledges that Yangon is in need of modern infrastructure and the key to the development is talent. In order to successfully develop its logistics, industrial and commercial sectors, Yangon needs to generate a labour force through either immigration or by effectuating a shift from the agricultural sector to the manufacturing and services sectors. Myanmar intends to improve education – through creating equitable access to high quality education by building new schools in outer townships – to boost the country to ‘upper-middle-income’ status by 2030. Designing infrastructure and education programmes that bridge the gap between rural and urban areas will allow Yangon Region to access a greater talent pool from beyond its boundaries.

Yangon Region is in transition, but it has bold ambitions to become a leading ASEAN economy. Reaching this status will call for a concerted effort – from government, businesses, entrepreneurs and investors. It will also require innovative and ambitious solutions, but most importantly, a vision.
Challenges and Opportunities

The Yangon Region is a developing economic hub. It has a young population, and is well placed to capture an urbanisation ‘dividend’ that creates employment, raises productivity, supports new enterprises and reduces the long term, environmental and cost impact of inefficient infrastructure.

Providing affordable housing and municipal services, while investing in good economic infrastructure, are fundamental to supporting the growing population of Yangon, and ensuring Yangon Region’s economic potential is reached. In parallel to these core areas of development, Yangon aims to offer an attractive quality of life and good job opportunities for all residents. Environment friendly and efficient transport, energy, industrial developments and effective land use are critical to promoting Yangon as a sustainable city, while investments in healthcare, education, leisure and cultural facilities improve the quality of life for the people of Yangon Region.

Like all developing economies, Yangon Region faces challenges, some of which are listed below. How it deals with these challenges in the coming years will determine the speed and sustainability of its economic development, and determine its attractiveness as a Regional economic hub for talent and multinational corporations.

- **Urbanisation** – The high rate of urbanisation coupled with economic growth and historic underinvestment in infrastructure pose the primary challenges facing the Yangon Region. With a population that will be approaching 10 million in the coming decade, the Region will see an increased demand on transport networks and utilities and the need for housing will grow. The growing economy will consume more power and water, require strong logistics networks and commercial and industrial space into which it can expand.

- **Transport infrastructure** – As the economy expands, and more people use the traffic networks of Yangon Region, the historic lack of investment in an integrated transport system becomes more apparent. Businesses and the population currently rely on the road network, rail network and waterways as the primary transport assets of the Region. The current networks require significant investment to ease congestion and increase the capacity for the transport of goods to support industrialisation and trade growth.

- **Power** – The rapid growth of Yangon Region’s economy has resulted in demand for power exceeding supply, resulting in occasional power outages, impacting businesses, households and the ability of Yangon to function effectively. It is expected that Yangon Region needs an additional 3,000 MW of power by 2022 – representing double its current demand for power.

- **Municipal services** – The increasing population and growing economy of Yangon Region places pressure on critical municipal waste management and sewerage services. Access to potable water is not universal, with significant non-revenue water and limitations in water sanitation. Approximately 92% of water is supplied from reservoirs and 8% from ground water resources. YRG aims to improve average water service hours from 13 hours per day currently to 24 hours per day by 2025.

- **Real Estate and Housing** – Commercial real estate is comparatively expensive (though becoming more affordable as supply increases), placing an additional cost burden on businesses. The supply of commercial real estate has increased steadily in recent years with growth in retail malls of 24% YOY since 2017, and total office space of 380,000 sqm today. A further 220,000 sqm of office space is due to be delivered by 2021. However, the demand for housing exceeds the supply of housing stock across high end, affordable and low cost housing as a result of the increasing population - the annual demand for new low cost or affordable housing units is currently between 75,000 and 100,000 units per annum. It is estimated that around 35% of Yangon Region’s population require low cost or affordable housing units to avoid growth in informal settlements.
**Healthcare and education facilities** –
Access to healthcare is not universal across the Yangon Region. In 2012, there were 0.9 hospital beds per 1,000 residents, well below World Bank acceptable standard of 2.1 beds. This ratio is thought to have reduced as a result of high urbanisation rates outstripping supply of new beds. Yangon Region also requires more qualified teachers to boost its ability to grow the education sector, which is well served at primary education levels – however, there is a significant drop in school attendance levels at high school level (51%). The number of international schools has doubled from 25 in 2012 to 50 in 2017. As the Region transforms into an international economic hub, investment into good quality healthcare and education both for local population needs as well as international employees of investors into Yangon is being prioritised.

**Developing regulatory framework** –
Myanmar’s regulatory and legal framework is being actively strengthened as discussed earlier in this Report. The Government of Myanmar recognises the need for reform and is embarking on a structured program to modernise its regulatory and legal frameworks.

Like any emerging market a lack of access to capital and debt with high interest rates, a volatile currency and lack of capacity across both government and private sector are issues that need to be addressed when structuring and procuring infrastructure assets. The Union Government is actively addressing these issues to ensure they do not become barriers to investment and growth, while the challenges above represent opportunities to develop and invest in needed infrastructure.

---

**Myanmar Sustainable Development Plan and Project Bank**

The Myanmar Sustainable Development Plan (MSDP) has been published by the Union Government to address the demands resulting from rising urbanisation, the need for investment and added economic activity, by proactively building institutional capacity to support a sustainable infrastructure development programme and ensure effective pipeline management.

The MSDP provides an overall framework and vision for development across Myanmar; ensuring strong policy direction with comprehensive implementation plans; providing greater transparency and avoiding ‘silo-ing’ of plans. Ensuring effective policy direction and alignment will be critical for Myanmar to achieve genuine, inclusive and transformational economic growth. The MSDP also aligns with the United Nations’ Sustainable Development Goals, the 12 Point Economic Policy of the Union of Myanmar and the ASEAN Economic Community.

As the largest city in Myanmar, Yangon has an important role to play in helping achieve the MSDP vision; and in recognition of this YRG has worked alongside multiple stakeholders to design a specific vision for Yangon that embraces the goals and values of the nation. This vision will tackle infrastructure pressure points, cater to the current and future citizens of the region and adopt new and innovative solutions that are scalable, resource efficient and environmentally sustainable.

In conjunction with this, the Union Government has published Project Bank, which aims to identify priority infrastructure projects across Myanmar. This list of priority projects across different sectors and Ministries will drive the procurement program for most projects across the country. YRG has initiated its own Project Bank that lists priority 80 projects across the Yangon Region.
Yangon’s Project Bank will serve as the master list of infrastructure projects across the Yangon Region for the coming years. Projects will be procured using globally recognised commercial structures with funding from various sources - the Union and Yangon Region governments, multi-lateral development banks, overseas development assistance loan packages and very importantly private sector funding resources.

YRG has been clear that it aims to develop the Yangon Region with clear principals of sustainability in mind. This is represented in the diagram below, which enshrines some of YRG’s core objectives.

The plans for the future Yangon Region would likely lead to the development of a socially inclusive, sustainable economic hub, driven by strong governance. Yangon’s future infrastructure would enhance economic growth and vibrancy, with efficient, integrated public transport systems that drive connectivity across the Region, utilising roads, railways, and waterways.

Yangon Region’s citizens would have access to cost effective and sustainable municipal services, with improved access to potable water and sanitation services.

As demand for power increases in line with economic growth and an increased population, YRG aims to implement a program to procure and increase power supply from varied sources – solar, waste to energy, wind and conventional power sources.

Significant effort is being made to increase the supply of housing to Yangon’s citizens, eradicating informal settlements and supplying housing stock to people moving into Yangon. These infrastructure plans are further elaborated below.

YRG has developed a clear roadmap to achieve its vision of the Yangon Region – a Region that is connected internally and to the global economy through enhanced transport networks; providing a sustainable, well governed Region to its citizens who have access to world class services, healthcare and education; an economy based on industrial growth and connectivity.
Since the opening up of Myanmar economy in 2011, Yangon City has experienced explosive growth in economic and human activities. The city’s century-old infrastructure, designed for a different era and a much smaller population, creaks under the weight of its rapid transformation. Like many historical cities endowed with a rich history and beautiful architecture, Yangon was faced with the prospects of decades of gridlock and paralysis as it rebuilds for an industrial twenty first century. Instead, YRG’s plans called for the development of a NYC and a Yangon SEZ to the west and south of the current Yangon City, much like how Shanghai developed the Pudong area on the far bank of the Huangpu River, away from the historical Puxi area on the near bank. This deftly alleviates the pressure off the old Central Yangon, to preserve its history and architecture and allow it time to redevelop and rejuvenate.

NYC is a 20,000 acre development to the west of Central Yangon across from Kyee Myin Daing Township that will transform Yangon Region while creating 2 million jobs in the longer term. NYC is phase 1 of a broader development vision that will stretch down to the Yangon SEZ and a new Deep Sea Port at Elephant Point on the Gulf of Martaban. NYC and the Yangon SEZ are the central pillars the Yangon Region’s long term development plans, aiming to boost economic growth while opening up new land areas for development.

NYC is envisaged to be delivered by 2020, and will comprise new villages and townships, industrial zones and bonded warehouse facilities, a power plant and power distribution network, water and sewerage treatment facilities, and a network of artery roads and two bridges connecting NYC to Central Yangon. As can be seen from the map below, one of the bridges will be to the east of NYC connecting to Central Yangon while the second bridge is in the north of NYC connecting to Hlaingtharya Township on the north west of Central Yangon. The construction of new road arteries within NYC will provide strong connectivity within NYC to Central Yangon and beyond.
The development of NYC will enable the development of new residential and economic clusters that will reduce congestion in Central Yangon, offering the opportunity to redevelop high value parts of Central Yangon that are in need of investment or suffering from sub-optimal land usage.

Phase 2 of this transformational project will encompass the area from Dala Township, on the southern bank of Yangon River across from Central Yangon and NYC, and the Deep Sea Port on the Gulf of Martaban, including the Yangon SEZ. This development will be up to 67,500 acres in size and comprise industrial zones, a new international airport, the Deep Sea Port, commercial and residential developments, and green, open spaces.

NYC and the broader Yangon SEZ will connect Central Yangon to the Indian Ocean, and act as a direct gateway for increased global trade.

The long term plans to create the Deep Sea Port at Elephant Point, connecting to NYC and Central Yangon, through new residential, commercial, industrial and green space will be transformational. NYC will allow Yangon to expand sustainably – creating new areas into which businesses and residential areas can grow; relieving pressure on land usage in Central Yangon; creating new industrial zones and transport networks that will boost the economy and create jobs. The Deep Sea Port will materially increase capacity to import and export products; allow for the current Yangon Port area to be regenerated into high value river front residential and commercial properties; and alleviate congestion in Yangon City, resulting from current port traffic.
2. Central Yangon transport and connectivity

Sustainable inner city transport to provide mobility and accessibility for Yangon’s residents is a priority for YRG. An Integrated Transport Masterplan has been developed and clearly identifies a number of projects that will greatly improve connectivity within the Yangon Region and the broader Myanmar, ASEAN and global markets. A number of exciting procurements are already underway, as YRG endeavours to provide more sustainable and affordable transport solutions for its population and businesses.

Upgrading of the railways, a new Mass Rapid Transit, improvements to the current road network and the construction of new overhead expressways, as well as the use of waterways provide new avenues to boost multi-modal transport solutions across Yangon.

The Yangon Circular Railway and Yangon to Mandalay railway upgrade projects are already underway. The tender for the redevelopment of Yangon Central Station into a mixed use development with new terminal was awarded to a consortium led by Oxley Holdings, a Singapore based company, in Q1 2018. Plans for the North South Urban Mass Rapid Transit line connecting Central Yangon to Yangon International Airport via Yangon Central Station are currently being developed, while an East West line is also envisaged.

There are a number of road upgrade projects underway. The Yangon-Mandalay Expressway is being upgraded currently and will likely see the entire road repaved with asphalt before 2021. Further, a 64 kilometre stretch of road near Yangon will be expanded to four lanes and outfitted with modern safety equipment. In addition, the Yangon-Pathein Highway project is being delivered under a build-operate-transfer (BOT) model with local business, Oriental Highway Company, to facilitate more efficient shipment of goods.

The Yangon Elevated Expressway will be a 47.5 km elevated ring road connecting Downtown, Yangon Port, Yangon International Airport and Mingalardan Industrial Zone. 10 consortia were shortlisted in December 2018 for the approaching bidding phase. The Outer Ring Road will improve logistics around the Greater Yangon Region and is currently at an early planning phase.

New bus and taxi services improve the efficiency of inner city transport – increased competition and new market entrants will improve services and reduce cost to the consumer, while addressing congestion issues. Yangon Bus Service (YBS) was launched in January 2017, to manage Yangon’s public bus services. Since inception, YBS has rationalised the number of operational bus routes across Central Yangon, and decommissioned a number of old buses, replacing these with 1,000 new buses, purchased from China. Furthermore, YBS has restructured and standardised the fare system, introducing a capped fare of MMK 300.

In October 2017, Yangon launched a water bus service with Tint Tint Myanmar Co., Ltd, starting with five ships for phase one. Further water bus services are planned.
3. Industrial Zones

China and other more mature economies are looking to move low cost manufacturing out of their markets into territories with lower wage costs as they shift focus into higher end technology driven manufacturing. The abundance of space, connectivity to the Greater Mekong Region and internationally, and low cost labour force make the Yangon a suitable environment to grow the region's low cost industrial and manufacturing base.

The Thilawa SEZ located in the Thanlyin township has helped attract investment of over $1.6 billion as of March 2019 and is expected to create 200,000 jobs once it is in full operations.

The New Yangon City and Yangon SEZ are long term development masterplans that capitalise on Yangon Region’s strategic position and help maintain and extend Yangon Region’s position as the financial, commercial and logistic centre of Myanmar. NYC and the Yangon Special Economic Zone will greatly add to the capacity and scale of Yangon Region’s manufacturing and industrial base and aims to create 2 million jobs.

In addition to the development of NYC, YRG are embarking on a broad program across all Industrial zones across the Yangon Region. Upgrading of 29 existing industrial zones and the development of 15 new industrial zones/cities with improved power supply, better waste management and better shared infrastructure will improve productivity, create new jobs and develop a more robust eco system of industrial and manufacturing clusters across Yangon Region. Further, these create an ideal destination for multi-national corporations or large manufacturing conglomerates if they are looking to invest in new factories or other facilities.

4. Power

A stable electric power supply of high quality and sufficient quantity for industrial development and supporting urban functions is being planned. The rising middle class, and growing economy demand this, while also having the means to buy the power at economically viable rates.

YRG aims to deliver a comprehensive portfolio of power generation, doubling its current generation capabilities of 3,000MW, by 2022, bringing total capacity to 6,000MW. The predominant source of this new power will come from new conventional gas power generation, but will be supplemented by renewable energy sources (wind, solar and waste to energy) as well as. Over the longer term a total of 11 power generation plants are due to be constructed by 2040, which would offer a combined generation capacity of 8,650MW. In addition to the 11 proposed plants, in early 2018, the 388MW Ahlone LNG Plant was awarded to Toyo Thai Myanmar Co Ltd and is due to be completed by 2021.

YRG aims to upgrade the existing transmission and distribution networks across Yangon Region. Currently, transmission lines are being upgraded with the construction of new 500KV main lines and 500/230KV lines and substations. A number of projects are already underway to enhance distribution lines to 11 townships across Yangon Region from 33KV lines to 66KV lines.
5. Municipal services

Yangon Region’s demand for water, waste management and sanitation continues to grow at a rate that exceeds supply. The majority of water supply comes from reservoirs (92%) and the remainder from ground water (8%). This met approximately 40% of demand in 2017. Approximately 60% of water in Yangon is currently non-revenue water (NRW). YRG plans to reduce the NRW rate in Yangon to 35% in 2025 and 15% in 2040. YRG aims to improve access to potable water through increases in the capacity of potable water production and investment across the water distribution networks to reduce leakage and waste.

New infrastructure will reduce water losses, while increasing revenue generated through more efficient water provision. JICA’s Greater Yangon Water Supply Improvement Project Phase I, implementation of Lagyunpyin WTP, is underway to supply water to 590,000 people in four new Dagon Townships (Zone 7 and 8) together with water transmission to Thilawa SEZ (42,000 m3/day). The project consists of five different packages for two water service reservoirs, installation of water transmission and distribution main pipelines and five chlorination facilities.

In addition, Greater Yangon Water Supply Improvement Project Phase II, the construction and rehabilitation of transmission facilities and distribution facilities in Zone 1 (CBD) and Zone 9 (Hlaingtaryar Township) is planned for implementation. This will be supplied with treated water from Kokowa WTP phase 1 (60 MGD) by 2025.

YCDC is also conducting a feasibility study for the Toe Myit water supply project with the aim to supply 120 MGD upon completion.

6. Port

The Yangon Port is the primary port in Myanmar and comprises two port areas, Yangon Main Port and Thilawa Area Port. It accounts for up to 90% of all export and import traffic in Myanmar. Yangon Main Port is a river port located at the fringes of Central Yangon with a capacity of less than 1,000,000 TEUs. Thilawa Area Port is located on the River in the Thilawa area and has a limited capacity of 800,000 TEUs.

The location of the Yangon Port is favourable in terms of last mile connectivity, but access and egress routes to Yangon Main Port create significant congestion within the downtown areas, while occupying prime riverfront real estate. Port capacity is being augmented through developments at Thilawa Area Port and Ngwe Pin Le, with additional capacity of approximately 530,000 TEUs but there are limits to the extent of growth available.

The growth in industrial output and the demand for raw materials will only increase in the coming years, as the Yangon Region economy continues to grow.

The Deep Sea Port at Elephant Point is a long term plan to shift port activity to the Gulf of Martaban, significantly enhancing port capacity while allowing continual growth. This has multiple benefits – allows larger vessels to transport goods to and from Yangon; relocation of the current port will free up valuable inner city, river front real estate that will be developed along the River; relocation of the port will reduce congestion within Yangon City by eliminating transport vehicles from inner city roads; and a significant number of new jobs will be created.

7. Housing and access to services

The current population of Yangon Region is approximately 7.4 million with expectations that this will increase to 10 million by 2035. Migration into Yangon Region results in an annual demand for new housing units of between 75,000 and 100,000 units per annum.

The Union Government aims to build over one million affordable housing units by 2040. A large proportion of these will be built in Yangon – YRG has committed to build 180,000 units by 2021. The additional housing stock aims to cater to all consumers.

NYC is key to the next phase of Yangon City’s development. It will relieve pressure on Central Yangon, allowing it to be redeveloped and rejuvenated, its century-old infrastructure upgraded while preserving the charm of its historically and architecturally significant buildings. As a greenfield site, NYC provides the perfect canvas for a modern industrial zone to be planned and developed from ground up, with significant land allocation for residential units.

Furthermore, YRG plans to enhance and improve the wet markets across Yangon – this will offer improved food safety standards while allowing better facilities for vendors and consumers alike.
The all-encompassing vision explained above will create a robust, sustainable economy across the Yangon Region. The broad set of projects outlined above address key challenges that result from high rates of urbanisation and economic growth; will significantly boost productivity through the creation of new economies and jobs for its citizens; enhance the liveability of Yangon City through better transport networks, utility provision, housing, healthcare and education.

Yangon Region offers extensive infrastructure investment opportunities across various sectors. YRG will be approaching the private sector to bid on economically viable, bankable projects where it can be shown that there is both interest and merit in attracting private sector capital into Yangon’s infrastructure story. YRG is following globally recognised procurement methodologies and utilising well understood commercial structures with funding from various sources - the Union and Yangon governments, multi-lateral development banks, overseas development assistance loan packages and very importantly private sector funding resources.

The final sections of this document highlight key aspects of each infrastructure sector across Yangon Region, while identifying specific projects and potential opportunities for both local and international investors for the coming years.

There are strong foundations for growth in Yangon and the government has made significant steps towards unlocking the nation’s potential. Further enhancements and investments in these 10 core areas will further boost economic growth and deliver a dynamic, prosperous and leading ASEAN city.
## Core Development

### 1. Ports
**Need:** Capacity to process 4 million TEUs at Yangon Port by 2030
**Opportunity:** Thilawa Area Port Expansion; Ngwe Pin Le Inland Water Transport Project; Kawhmu Multi-Purpose Port; New Yangon City Phase Two Deep Sea Port (Elephant Point)

### 2. Airports
**Need:** Expand current airport to meet air traffic demand; upgrade freight facilities
**Opportunity:** Yangon International Airport Expansion, Hanthawaddy International Airport; New Yangon City development in Kungyangon

### 3. Industrial Zones
**Need:** Upgrade 29 existing zones; create 11 new zones in outer townships
**Opportunity:** Yangon Amata Smart and Eco City; Korea-Myanmar Industrial Complex; Ngwe Pin Le Integrated Logistics Zone and IWT project; New Yangon City

### 4. Housing
**Need:** Stabilise housing gap by constructing 1 million low-cost housing units
**Opportunity:** Housing for government employees; Pyi Taw Thit housing redevelopment project; Yankin housing redevelopment project

### 5. Commercial Real Estate, Retail & Hospitality
**Need:** Mixed-use centres beyond CBD
**Opportunity:** Eco Green City; New Myanmar Convention Centre

## Hard Enablers

### 6. Inner City Transport
**Need:** Establish an integrated transport system; highway upgrades and road decongestion
**Opportunity:** UMRT connecting CBD to airport; San Kyi Wa Transportation Hub; Outer Ring Road

### 7. Power
**Need:** Provide stable electricity and energy supply to meet increasing demand
**Opportunity:** Development of LNG power stations; Improvement of Transmission/Distribution Lines and Substations

### 8. Water
**Need:** Increase water supply; reduce non-revenue water rate; reduce flood risk
**Opportunity:** Greater Yangon Water Supply Improvement Project; Water treatment plants and distribution facilities; Improvement of drainage infrastructure

## Soft Enablers

### 9. Education and Skills
**Need:** Access to schools in outer township; develop a skilled workforce
**Opportunity:** Construction of new schools that are more evenly distributed across the Yangon Region; Foreign investment in private sector education; Training of more teachers

### 10. Health
**Need:** Universal health care infrastructure among townships isolated from CBD
**Opportunity:** Foreign investment in new hospital facilities
4
Building the future
Union vision: Myanmar's 1,930 kilometre long coastline stretches from Bangladesh to Thailand and offers the potential to capitalise on the significant maritime trade volumes between China, India and ASEAN states. The Ministry of Transport and Communications (MoTC), operates the Myanmar Port Authority (MPA) that has responsibility for overseeing the nine functioning ports in Myanmar, out of which eight are deep sea ports and one is a river port (this can be seen in the map below). The majority of international cargo arrives at Yangon port with the other ports primarily being used for inland transportation.

Myanmar has improved its ranking in the World Bank’s Logistics Performance Index from 145 out of 160 states in 2015 to 137 out of 160 states in 2018. This index measures overall logistics performance by analysing infrastructure, services, border procedures and time, and supply chain reliability. While it is clear that recent enhancements in the performance and efficiency of Myanmar’s ports has contributed to the change in ranking, there is still significant room for improvement of infrastructure and for advancement on the logistics performance ranking (e.g. build deep sea ports instead of river ports).

The ports in Myanmar are shown on the map below:

<table>
<thead>
<tr>
<th>S/n</th>
<th>Port Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sittwe Port</td>
</tr>
<tr>
<td>2</td>
<td>Kyaukphu Port</td>
</tr>
<tr>
<td>3</td>
<td>Thandwe Port</td>
</tr>
<tr>
<td>4</td>
<td>Pathein Port</td>
</tr>
<tr>
<td>5</td>
<td>Yangon Port</td>
</tr>
<tr>
<td>6</td>
<td>Mawlamyine Port</td>
</tr>
<tr>
<td>7</td>
<td>Dawei Port</td>
</tr>
<tr>
<td>8</td>
<td>Myeik Port</td>
</tr>
<tr>
<td>9</td>
<td>Kawthaung Port</td>
</tr>
</tbody>
</table>
Yangon vision: The Port of Yangon is Myanmar’s premier port and caters for over 90% of export and import maritime cargo, making it an important player in the push for economic growth for both the city and the Union. The current capacity of Yangon Main Port is limited to less than 1,000,000 TEUs and Thilawa Area Port has a capacity of 800,000 TEUs. By 2030, the total container throughput is forecast to exceed four million TEUs annually. Hence there is a need for capacity expansion. To fulfil its ambitions to become a leading ASEAN city, Yangon plans to upgrade its current port (new terminals are being constructed in the Thilawa Area Port) whilst also developing a new deep sea port (at New Yangon City Phase 2 Elephant Point) to cater to an increasing volume of trade and enable access to the port by larger vessels. It is clear that Yangon’s future economic growth will be greatly enhanced through investment into its port infrastructure.

The current ports and future opportunities in Yangon Region are shown in the map below:
Overview of Ports in Yangon

- The existing Yangon Port comprises two port areas, Yangon Main Port and Thilawa Area Port. Both are located on the Yangon River.
- Ports are an important enabler to Yangon’s trade, industrialisation and economic ambitions – imports & exports are estimated to grow at 18% p.a. to 2020, with imports continuing to outweigh exports. However the existing ports require significant technical and safety upgrades and development to reduce transport and logistics costs, supplement trade and increase the competitiveness of the country’s supply chains.
- The current capacity of Yangon Main Port is limited to less than 1,000,000 TEUs (twenty-foot equivalent units) and Thilawa Area Port has a capacity of 800,000 TEU. By 2030, the total container throughput is forecast to exceed four million TEUs annually. Hence there is a need for capacity expansion.
- Yangon Main Port’s proximity to industrial zones makes it very attractive to shippers in terms of last mile transportation cost advantage. However, transport restrictions within city limits constrain the port’s efficiency due to access and egress challenges. Furthermore, the port is adjacent to the urban area of Yangon which limits scope for expansion.
- Thilawa Area Port’s access to and from Yangon city for container traffic is constrained by load restrictions on Thanlyin Bridge, the location of the Dagon Bridge as well as city limit traffic restrictions.

<table>
<thead>
<tr>
<th>Asset</th>
<th>Size</th>
<th>Capacity</th>
<th>Private sector players</th>
</tr>
</thead>
</table>
| Yangon Main Port    | 257 acres, 7 operating terminals    | 1 million TEUs | - Myanmar Industrial Port  
                        |                                    |                          | - Asia World Port Management  
                        |                                    |                          | - Lann Pyi Marine  
                        |                                    |                          | - Myanmar Economic Corporation  
                        |                                    |                          | - TMT Ports                                                                 |
| Thilawa Area Port   | 1,369 acres, 14 operational plots  | 800,000 TEUs | - Myanmar Integrated Port  
                        |                                    |                          | - Myanmar International Terminal Thilawa  
                        |                                    |                          | - Wilmar Myanmar Port Terminals (Thilawa)  
                        |                                    |                          | - Green Asia Port Terminal  
                        |                                    |                          | - Elite Petrol Chemical  
                        |                                    |                          | - Puma Energy Asia Sun  
                        |                                    |                          | - Kyee Myin Daing International Port Terminal |
Key Developments – Implementing the Vision

- Most ports in Myanmar are developed on a build-operate-transfer (BOT) basis with MPA acting as the landlord.
- Under the 2016 Myanmar Investment Law (MIL), the construction of warehousing facilities at ports can now be carried out by foreign companies via joint venture with local companies. Further, there are no restrictions on foreign ownership in port terminal activities.
- The Thilawa SEZ was one of the first steps towards building an attractive business environment for investors in the Thilawa area in Yangon, and instrumental in positioning Thilawa as a logistics hub.
- The MPA Law (2015) and the MPA Rules (2016) define the handling of international ports and port services in the country. Authorities are also planning to develop regulations that would apply to dry ports creating enhanced clarity and consistency for operators and investors.
- The long term vision of YRG is to create a new Deep Sea Port at Elephant Point, connected to Central Yangon through the Yangon SEZ and NYC. This would greatly enhance capacity and allow continued growth, while easing the logistics challenge of having Yangon Port in Central Yangon.

In Focus: Thilawa Area Port

Five plots within Thilawa Area Port have been operated by Myanmar International Terminal Thilawa (MITT), a subsidiary of Hutchison Port Holdings, since 1998 catering to container trade. The other five operational plots are for non-containerised trade including grain, rice and other agriculture products.

As there is limited land area around the Yangon Main Port, the development of port facilities at the Thilawa Area Port is crucial to port activities and future economic growth in Yangon Region. With the Thilawa SEZ development in full-swing, Thilawa is strongly establishing itself as a key logistics hub.

In March 2018, Kamigumi Co. Ltd, a Japanese integrated logistics company finalised a concession agreement with the MPA for operation of the proposed new multipurpose terminal being financed by Japanese Official Development Assistance loans. A new local terminal operation company, Thilawa Multipurpose International Terminal (TMIT), was set up by Kamigumi, to operate the terminal, with handling capacity of approximately 200,000 to 240,000 TEU per year. Construction was completed in December 2018 and commercial operation is planned to begin before mid-2019.

Another USD 65 million bulk terminal is in the pipeline near Thilawa SEZ. This will be a 75:25 joint venture between Myanmar’s Lluvia, an agri-processing company and Kamigumi. Lluvia itself is a joint venture between Myanmar’s Capital Diamond Star Group, and Mitsubishi Corporation.

These developments will expand the range of port services available in Myanmar and boost its competitive advantage in the regional logistics industry.
The Future of Ports in Yangon

<table>
<thead>
<tr>
<th>Asset</th>
<th>Size</th>
<th>Selected private sector players</th>
<th>Capacity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thilawa Area Port</td>
<td>1,369 acres</td>
<td>- MITT</td>
<td>An additional 200,000 – 240,000 TEUs</td>
<td>Expansion in progress</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- TMIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Joint venture of Kamigumi and Lluvia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ngwe Pin Le Integrated Logistics Zone and IWT project</td>
<td>60 acres (part of a 224 acres logistic zone)</td>
<td>To be determined</td>
<td>291,000 TEUs</td>
<td>Procurement</td>
</tr>
<tr>
<td>Kawhmu multi-purpose Port</td>
<td>1,053 acres (phase 1 is 500 acres)</td>
<td>To be determined</td>
<td>To be determined</td>
<td>Planning stage</td>
</tr>
<tr>
<td>New Yangon City Phase Two Deep Sea Port (Elephant Point)</td>
<td>15,590 acres (part of a 51,956 acre SEZ)</td>
<td>To be determined</td>
<td>To be determined</td>
<td>Planning stage</td>
</tr>
</tbody>
</table>

Government stakeholders
- Ministry of Transport and Communications (MoTC): governs the MPA
- MPA: responsible for any port activity in the region. They play a role by involving the private sector under the landlord model in addition to being regulators for the ports. MPA is also responsible for dredging the river for port activity.
- YRG: responsible for the development of industrial activity in the region
- The Customs Department: responsible for licensing and approvals for customs purposes

Conclusion
It is clear that Yangon’s future economic growth will be greatly enhanced through investment into its port infrastructure. The current port capacity is limited and inefficient largely due to its location in Downtown Yangon, with constraints in possible expansion and limited access and egress capacity, creating inefficiencies and traffic in Downtown Yangon. YRG has developed long term plans to grow Yangon’s port capacity in a bid to support its growth.
**Union vision:** The total number of local and international airline passengers increased to 9.2 million in 2016 from 7.6 million in 2014. Myanmar currently has 3 international and 30 domestic airports. By 2030, the number of passengers is expected to rise to 30 million. The airports in Myanmar, especially the domestic airports, need significant investments. The government plans to expand and upgrade airports in major cities as a priority, in order to develop the logistics and tourism sectors in Myanmar. Myanmar has privatized a series of airport operations under Public-Private Partnership (PPP) schemes over the last four years and also planned to upgrade several more. This is only the beginning of private sector involvement in the transformation of the airport sector in Myanmar. The top 5 airports in Myanmar are shown on the map below:

<table>
<thead>
<tr>
<th>S/n</th>
<th>Airport</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yangon International Airport</td>
</tr>
<tr>
<td>2</td>
<td>Naypyidaw International Airport</td>
</tr>
<tr>
<td>3</td>
<td>Mandalay International Airport</td>
</tr>
<tr>
<td>4</td>
<td>Bagan Airport</td>
</tr>
<tr>
<td>5</td>
<td>Heho Airport</td>
</tr>
</tbody>
</table>

**Yangon vision:** Yangon Region needs to be ahead of the game for air connectivity for both passengers and freight in order to support its economic growth ambitions. YRG recognizes this and is planning the transformation of the airport sector. Yangon International Airport underwent significant upgrades of its terminals and runways in a bid to increase its capacity to 6 million passengers per year. There are further expansions in the pipeline, with plans to increase capacity to 20 million to cater to future needs. In addition, Yangon plans to develop two new airports- Hanthawaddy International Airport (80km from Downtown Yangon) and a new international airport as part of the New Yangon City development in Kungyangon, south of Yangon. Hanthawaddy International Airport is expected to have an initial handling capacity of 12 million passengers per year. These new airports will greatly enhance Yangon as a primary air traffic node in the region while boosting capacity to cope with growing demands of a growing economy. The current airport and future opportunities in Yangon Region are shown on the map below:
At a glance

- Myanmar currently has 3 international and 30 domestic airports.
- Airport infrastructure in Myanmar remains inadequate in many respects, with limited paved runways and an inability to cater to larger planes in many areas, forcing them to land in nearby countries and haul freight overland instead.
- Tourism is a significant contributor to economic growth and the main activity driving developments across the air transport sector.

Overview of airports in Yangon

- The largest airport in Myanmar is Yangon International Airport (YIA), with an annual handling capacity of six million and one runway that is capable of handling large international aircraft.
- Yangon’s passenger traffic has witnessed significant expansion since liberalisation in 2011, with figures placing passenger growth at 8.48% in 2017.
- Air traffic demand in Myanmar is forecast to reach 42 million passengers in 2040, and 72 million passengers in 2050. Current airport capacity will not be adequate to handle this surge in passenger numbers and therefore the development of new international airports is critical in the near future.
- Air freight volumes in Myanmar are also forecast to grow at an annual average rate of 4.45% over the medium term, with air Freight Tonne Kilometres forecast to grow at 2.77% annually.
- There is a pressing need to upgrade freight facilities at YIA if Yangon is to reach its air freight potential. At present, there is a shortage of warehouse capacity, as well as handling equipment.
In focus: Yangon International Airport

Myanmar’s aviation sector has experienced rapid growth in international traffic, with passenger volumes more than quadrupling between 2011 and 2017. As a result, expansion of YIA was necessary to increase capacity and support future growth.

The DCA and Yangon Aerodrome Company Limited (a subsidiary of Asia World Consortium) signed a 30-year concession for the development, management and operation of the YIA in January 2015. The airport’s development project is being executed in three phases:
- Phase one involved two stages. The first stage was the construction of a new Terminal 1, which opened in March 2016 as an International terminal. It added a gross floor space of approximately 100,000 sqm. The former VIP terminal was temporarily being used as the domestic terminal, until Terminal 3 was completed. Stage two was the construction of a new domestic terminal (Terminal 3) which was opened in December 2016.
- After the opening of Terminal 1, the former International Terminal was renamed “Terminal 2”. Terminal 2 was closed in July 2018 to undergo extensive renovation.
- Phase three of the airport development includes the linkage between Terminal 1 and Terminal 2, the extension of the runway and apron, extension of the cargo building, the construction of a VIP/CIP terminal and upgrading of Terminal 2. The work of Phase three is nearing completion.

Opportunities will flow from the expansion of YIA from facilitating the growth of tourism, creating jobs, and enabling the transfer of critical aviation-related skills such as manufacturing and maintenance to the local community.

Key Developments – Implementing the Vision

- The government has recognised the importance of improving existing airport infrastructure to accommodate growth in both freight and tourism. In 2016, YIA underwent significant upgrades at its terminals and runways in a bid to increase its capacity to 6 million passengers per year. There is further expansion in progress, with plans to increase capacity to 20 million to cater to future needs.
- Development of a new international airport is also being considered as part of the New Yangon City development in Kungyangon, south of Yangon, due to air traffic demands in the longer term. This will be Yangon Region’s third airport.
- The USD 1.5 billion Hanthawaddy International Airport project, located 80 kilometres from Downtown Yangon, is a planned national project to cater to increased tourist arrivals in the future and to ease the traffic congestion around YIA. Once complete, it will be the largest major gateway for international airlines in Myanmar. In 2016, a consortium comprising Japan’s JGC Corporation, Singapore’s Changi Airport International and Yongnam Holdings signed a framework agreement to design, construct and operate the airport. However, in Q1 2018, the consortium announced that the framework agreement had expired. The Japanese and Myanmar governments are expected to meet in 2019 in an attempt to kick-start the project. Myanmar liberalised its airspace in 2011, allowing new airlines to enter the market, increasing competition. As of November 2018, YIA handled 31 international airlines and 10 domestic airlines, compared to 20 international airlines and four domestic airlines before 2011.
- To enable ongoing institutional reform the Department of Civil Aviation (DCA), under the Myanmar Airports’ Authority Law, was split in two, creating a regulatory agency and an airport and air navigation services provider.
- The DCA is also working with its neighbours in ASEAN to modernise the country’s air traffic operations and bring systems in line with International Civil Aviation Organisation requirements. It has been focusing on developing satellite-based navigation technologies to allow aircraft to execute shorter and more direct routes, as well as more efficient take-offs and landings.
- Foreigners are permitted to invest in domestic and international air transport services via joint ventures with Myanmar private entities or government agencies. Foreign investors are permitted to invest in the construction and operation of airports, aviation training, aircraft repair and maintenance, air transport services, marketing air ticketing services, aircraft leasing, air cargo services, airline catering and fuelling services, airport passenger services and airport hotels.
### The Future of Airports in Yangon

<table>
<thead>
<tr>
<th>Asset</th>
<th>Investment</th>
<th>Private sector players</th>
<th>Capacity</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yangon International Airport</td>
<td>USD 150 million to upgrade and expand</td>
<td>Asia World Consortium</td>
<td>Capacity will be expanded from 6 to 20 million passengers per year</td>
<td>Expansion in progress</td>
</tr>
<tr>
<td>Hanthawaddy International Airport project</td>
<td>USD 1.5 billion</td>
<td>In 2016, a consortium comprising Japan’s JGC Corporation, Singapore’s Changi Airport International and Yongnam Holdings signed a framework agreement to design, construct and operate the airport.</td>
<td>Estimated to be 12 million passengers</td>
<td>In Q1 2018, the consortium announced that the framework agreement had expired. The Japanese and Myanmar governments are expected to meet in 2019 in an attempt to kick-start the project.</td>
</tr>
<tr>
<td>New Yangon City development in Kungyangon</td>
<td>No estimates done yet</td>
<td>Not selected</td>
<td>Not known</td>
<td>Early planning</td>
</tr>
</tbody>
</table>

**Stakeholders**
The DCA is an organisation under the Ministry of Transport and Communications (MoTC), and is responsible for regulating civil aviation activities across Myanmar. The DCA also issues notifications, orders, directives and circulars regarding various aspects of the aviation industry.

**Conclusion**
The Yangon Region Government recognises the importance of addressing the growing need for air connectivity for both passengers and freight in order to sustain economic growth. The government has very ambitious plans to transform the airport sector – both in terms of physical infrastructure and traffic. A holistic approach to this is important – the creation of a new airport in the outskirts of Yangon Region is a concept similar to large cities across Asia, for example Kuala Lumpur International Airport and Suvarnabhumi Airport.
**Union vision:** Goal five of the MSDP, ‘Natural resources and the environment for posterity of the nation’ aims to manage cities, towns, and historical and cultural centres efficiently and sustainably. This will include developing and effectively implementing a national housing strategy that includes low-cost and affordable housing for vulnerable groups, including ethnic minorities, internationally displaced persons, and women and children. It also covers the resettlement of squatters and the improvement of slum areas.12

The Myanmar Ministry of Construction (MoC) plans to stabilise the housing gap by accelerating the housing supply by more than one million low-cost units to cater for the expected population in 2040. The Department of Urban and Housing Development (DUHD) within the MoC foresees that 80% of the one million homes would be built by the private sector.

**Yangon vision:** Population growth and urbanisation have resulted in significant price increases and demand far exceeds supply of affordable housing in Yangon. In 2014, there were 1.58 million housing units in Yangon; however more than 1.8 million people (35% of the population) are still in need of affordable housing.

The concentration of commercial activities and industrial zones in Yangon attracts rural migration of people who are in need of affordable housing near to their place of work, placing additional pressure on the housing supply. It is estimated that 300,000 people move to Yangon each year from Myanmar’s rural heartlands, leading to a housing shortage of between 75,000 and 100,000 apartments annually. As a consequence, approximately 25% of dwellings in Yangon are informal settlements (temporary huts and shanties) created to house the influx of factory workers.13 The development of new low-cost housing units in Yangon, as a part of the National Housing Plan’s one million unit target, will go a long way to help solve the lack of housing availability for Yangon’s population. There is also a focus to ensure that residents on the fringes of Yangon’s rapidly expanding city can also enjoy equitable access to housing.

The National Housing Policy and Strategy provides a detailed framework for the implementation of the housing plan, including the legislation; land rights; housing supply and finance; redress to informal settlements; and disaster and sustainability readiness. This policy will provide Yangon with a clear roadmap to build new homes for the 1.8 million people currently in need of affordable housing, and will provide a better regulatory environment for investors who are currently deterred by high land prices and informal land registration processes.

A key component of YRG’s strategy to develop affordable housing in Yangon is the elimination of land speculation, whereby plots of land are kept fallow in anticipation of increased future values. Speculators who have no intention of occupying these properties are the cause of dramatic increases in price for both residential and commercial properties. Poor land subdivision, incompatibility of land blocks, and hindrance of urban road development across Yangon are a result of land speculation and a focus of the government going forward.
At a glance

- By Yangon city population is expected to reach nearly 10 million by 2035. Based on the population growth rate between 1983 and 2014, it is anticipated that Myanmar will need an additional 4.8 million housing units by 2040. Shortly after the current Union Government assumed office in 2016, it announced plans to build 200,000 low-cost apartments in cities across Myanmar in an effort to combat the shortage of affordable housing.

Overview of housing in Yangon

- The population of Yangon Region is 7.4 million, with Yangon City having one of the highest population growth rates among Myanmar cities. It is estimated that 300,000 people move to Yangon each year from Myanmar’s rural heartlands, leading to a housing shortage of between 75,000 and 100,000 apartments annually. At present, the government only has the capacity to construct an average of 30,000 apartments a year, meaning that investment from the private sector is critical.

- Land and housing prices in Yangon have been steadily on the rise and nearly 80% of Yangon’s population are having to rent their homes in an environment where rental prices are increasing. The impact of this shortfall is felt by middle-income groups as well as low-paid employees. Research by DUHD estimates that more than 1.8 million or 35% of the population in Yangon are in need of low-cost housing.

- Current shortage of affordable housing has resulted in a large number of informal settlements in Yangon that are home to an estimated 440,000 informal settlers, or ‘squatters’. The majority are located on the northern outskirts of the city.

- YCDC and the DUHD have been building low-cost housing since 2013. These are allocated on a lottery basis.

- A recent low-cost apartment sale by YRG in early 2018 priced the apartment units between MMK 10 to 60 million (~USD 6,600 to 39,700), depending on location. Buyers are required to place a down payment of 30% of the purchase price into a state-run savings account.

Key Developments – Implementing the Vision

Affordable housing:

- In 2014, the MoC established the Construction and Housing Development Bank (CHDB) to facilitate the sale of affordable housing units via instalment plans. The initial loan tenure was eight years, however in 2016, this was raised to 15 years. This extension and other policies designed to encourage the fair and equitable structuring of housing loans and financing mechanisms are essential to the long term growth of sustainable housing.

- In 2017, the Myanmar Construction Entrepreneur Association (MCEA) announced the start of low-cost housing projects in cooperation with the government and financed through bank loans across Myanmar, including Yangon. It was the first time that private developers and the government implemented affordable housing projects through a PPP model.

- MCEA is currently carrying out a project on 220 acres in Dagon Seikkan Township in Yangon to offer low-cost, medium-cost and staff housing units. The Japan-Myanmar Association for Industry of Housing and Urban Development is a key collaborator as is Singapore’s Surbana Jurong through the provision of master planning, architectural consultancy services, as well as civil and structural, mechanical and electrical services.

- The government will also partner with the local Alliance Star group of companies in a USD 2 billion Eco Green City in Hllegu Township to be built over 10 years. The first phase of this initiative includes low cost housing, a transportation terminal, government administration offices and shopping malls.
Regulations:
- Recent regulatory reform including the new MCL and the Condominium Law 2016, Condominium Rules 2017, along with more reasonable mortgage terms should improve market sentiments and confidence going forward while making housing more accessible to Yangon’s population.
- The Condominium Law was enacted by the Union Parliament in January 2016 and the Condominium Rules were issued under notification No. 267/2017. The Condominium law prescribed a broad framework for condominium investments in Myanmar and the Condominium Rules provides detailed implementation provisions. Foreign buyers are able to now own up to 40% of the saleable floor area of registered condominiums – a prospect that local developers hope will spur market activity. The introduction of the law also meant that all buyers of registered condominiums will be eligible for condominium certificates (similar to strata title) and thus support the development of a mortgage market. In January 2019, the MoC announced the formation of a management committee to oversee the implementation of regulations under the Condominium Law 2016 and Condominium Rule 2017.

The future of housing in Yangon
- Yangon will need one million housing units by 2040. The DUHD plans to provide 20% of the housing units and expects the remaining 80% to be constructed and supplied by a combination of local government and private sector resources.
- YRG has made the resettlement and re-housing of the estimated 440,000 informal settlers a priority and commissioned a survey with the aim of formulating data-driven solutions. As of May 2018, YRG had issued 167,738 smart ID cards that give informal settlers priority for resettlement in affordable housing projects. YRG are also considering other land options for the construction of affordable housing, and once the land is secured, will look to involve the private sector.
- A JPY 15 billion (USD 135 million) loan has been obtained from the Japan International Cooperation Agency (JICA) to promote the supply of low- and medium-cost housing in Yangon, Ayeyarwady, Magway and Sagaing regions by providing housing loans. The MoC will build 405 buildings, consisting a total of 11,914 homes across these four regions. The first phase of the project will be built by the DUHD in the Yangon Region with loans offered through the CHDB. The second phase will be built using Japanese technology and loans will be offered to buyers through both the government and private banks. In the third phase, to be developed by the private sector, loans will be offered through private banks. Buyers will be required to make a down payment of 20% of the unit’s value and the balance will be financed via loans that carry 8.5% pa interest rate, payable over a 10 to 15 year period. This project is planned to be completed by December 2022.
Examples of future housing Projects in Yangon

<table>
<thead>
<tr>
<th>Project</th>
<th>Location &amp; Size</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing for government employees</td>
<td>Dagon Seikkan township • 183 acres</td>
<td>Tender process</td>
</tr>
<tr>
<td>Pyi Taw Thit housing redevelopment project</td>
<td>Pazontaung township • 4.6 acres</td>
<td>Phase one is under construction. Expected completion date of May 2020.</td>
</tr>
<tr>
<td>Yankin housing redevelopment project</td>
<td>Yankin township • 31.95 acres</td>
<td>An invitation for Expression of Interest. for phase two was issued in March 2019.</td>
</tr>
</tbody>
</table>

Stakeholders
- Government: DUHD; CHDB; Ministry of Construction; Yangon City Municipal Committee, YRG.
- Users: current population of Yangon region and future migrants to Yangon.

Conclusion
The population of Yangon Region is growing at a rapid rate, with forecasts expecting a population of 10 million by 2035, from a current population of approximately 7.4 million. This high growth rate, combined with a lack of affordable housing stock is contributing to a growth in informal settlements across Yangon. The government of Myanmar aims to address the affordability issues and growing demand for housing by initiating new housing programmes that will aim to build significant numbers of low cost housing units while facilitating easier access to financing for potential buyers.

YRG is keen to develop bankable commercial structures and a clear regulatory framework that allows investment in the sector. Capacity to deliver significant housing stock remains limited, and this will offer real opportunity for investors, engineering, procurement, and construction contractors, architects, advisors and lenders.
Union vision: The establishment of industrial zones in the mid-1990s was an integral part of Myanmar’s ongoing transition to a market-oriented economy. Industrial Zones have the ability to act as a catalyst for economic development and transformation, and, if implemented successfully, can help to generate employment, FDI, exports and trade. They can also facilitate skills development, technology and knowledge transfer, the adoption of best practices and cluster formation.

Due to economic and political barriers, the rapid industrialisation of land in the 1990s stalled and it has only been since 2015, with the peaceful election and transition to a civil government, that investors and companies worldwide are turning their attention to Myanmar. This has led to the industrial estate market in Myanmar experiencing a resurgence with manufacturing and logistics companies entering the market.

Yangon vision: As Myanmar’s core logistics hub, Yangon is home to 65% of its industrial estates, with 29 industrial zones spread across the Yangon Region. Besides announcing plans to upgrade the 29 industrial zones, YRG has also conducted preliminary studies to develop another 11 industrial zones over several phases at the outskirt townships of Yangon Region. This area has ample unused land that is prime for development of manufacturing hubs and factories, and would aid in decentralising the industrial areas from Yangon City. The current occupancy rates of some of the existing industrial zones are low (estimated to be about 40% in 2016) due to poor access to water, electricity, roads, drainage, and waste collection.

In 2018, YRG announced plans to develop the New Yangon City (NYC) on 30,000 acres of land west of Central Yangon across from Kyee Myin Daing Township. Phase I of the project will be developed on 20,000 acres of land and include an urban industrial district that could create 2 million jobs. The vision of NYC is to be a safe, smart and clean city that will serve as an example of efficiency, integrity and accountability.
At a glance

- Myanmar currently has 63 industrial zones in operation, occupying approximately 25,425 acres of land across all states and regions, with the exception of Chin State.
- Myanmar also has three Special Economic Zones (SEZs) at Thilawa, Kyauk Phyu and Dawei that offer an array of attractive investor incentives.
- As the most industrialised state in Myanmar, the Yangon Region is home to the majority of Myanmar’s industrial zones – 65% of the country’s industrial zones by land area are located in Yangon Region. There are 29 industrial zones currently in operation across Yangon, supporting a broad range of industries from manufacturing, services, trade, construction, and electric power services.
- The largest industrial zone in Yangon was established in 1995 in Hlaing Tharyar. There are currently 700 factories in Hlaing Tharyar employing around 300,000 people.
Overview of industrial zones in Yangon

- In 2012, responsibility for industrial zones was transferred to YRG. The development of industrial zones is now a priority for YRG with an aim to expand the industrial sector and achieve 10% growth in 2019.
- Many industrial zones require large amounts of investment in infrastructure such as water treatment, drainage systems, waste disposal, and electrification to enhance performance and attract further investment.
- According to the Ministry of Industry’s (MoI) 2016 Industrial Policy document, about 9,100 acres of land in Yangon has been developed into industrial zones with approximately 3,600 acres of allotted land earmarked for future industrial zone development.
- The Thilawa SEZ is located 23 kilometres south-east of Yangon City and was the first international standard SEZ built in Myanmar. It was developed by a Myanmar-Japan joint venture (Mitsubishi Corporation, Marubeni Corporation and Sumitomo Corporation) and focused on light industry in particular garment and footwear sectors. Thilawa SEZ has already attracted significant FDI inflows and its second phase continues to attract investor interest.

Key Developments – Implementing the Vision

- The 2016 Industrial Policy sets out Myanmar’s ambition to establish a new modern industrial nation. The key directions of the policy include advancing agriculture and heavy industries, developing micro, small and medium enterprises, creating job opportunities and increasing GDP per capita, reducing poverty in rural areas, and increasing industrial sector GDP contribution from 33% in 2013-2014 to 37% by 2031.
- The Special Economic Zone Law was enacted in 2014 and governs the development of SEZs in Myanmar. The SEZ Law decentralises decision-making to the SEZ Committee from the government. The SEZ Committee is responsible for administration, management and supervision of the zone.
- Various incentives and exemptions have been introduced under the SEZ Law to attract foreign and local investors including tax exemptions, reduced tax rates, import duty exemptions and an extended loss carry forward period.
- The new MCL passed in December 2017 facilitated further investment in industrial zones by allowing foreign investors to take a minority stake of up to 35% in companies incorporated in Myanmar. These companies were previously wholly restricted to Myanmar nationals only.
- The government is also looking at introducing further legislation to govern and standardise the development and management of industrial zones in order to create a clear and transparent system and attract more FDI.
- YRG has formed the Industrial Zone Upgrading Supervisory Committee to manage industrial zone development and upgrade the existing 29 industrial zones, starting with South Dagon as a pilot project.
In focus: Thilawa Special Economic Zone

Thilawa SEZ is located 23 kilometres south-east of Yangon near two port terminals and was the first international standard SEZ built in Myanmar. Myanmar Japan Thilawa Development Limited (MJTD) was established on 10th January, 2014 as the operator and developer of the Thilawa SEZ. The project delivered by MJTD is a partnership which brings together Myanmar Government, Myanmar Private Consortium, Japanese Government and Japanese Private Consortium. MJTD is a joint venture company among four major shareholders, two from Myanmar and two from Japan:

- 10% shareholding-Thilawa SEZ Management Committee (TSMC)
- 41% shareholding-Myanmar Thilawa SEZ Holdings (MTSH) Co., Ltd.(which is owned by 9 founding shareholders and public shareholders)
- 39% shareholding- MMS Thilawa Development Co., Ltd.(a consortium of Japanese companies including Marubeni, Mitsubishi and Sumitomo)
- 10% shareholding- Japan International Corporation Agency (JICA)

Thilawa SEZ is divided into two sections: Zone A has been operational since September 2015; and Zone B, has been under construction since February 2017.

Through its broad range of incentives and relaxed entry requirements, Thilawa SEZ has been a magnet for FDI with investors from 17 countries investing USD 1.6 billion in the zone by March 2019. This FDI has helped boost industrialisation and manufacturing activities and increase employment rates in the local population.

The future of industrial zones in Yangon

- Industrial zone development is expected to continue in order to cater to both local and foreign investor needs, increase economic activities and improve logistic requirements.
- New projects in the pipeline include the following:
  - **Yangon Amata Smart and Eco City:** YRG and Amata Corp, Thailand’s largest industrial estate developer, signed an MOU in May 2018 for a feasibility study of a new Smart and Eco City. The project will be located at Dagon Myothit, northeast of Yangon. The industrial zone project will span 16,000 acres and be developed in phases through to 2026.
  - **Korea-Myanmar Industrial Complex:** In February 2019, the MIC approved the setting up of a Korea-Myanmar Industrial Complex as a joint venture between the MoC and the Korea Land & Housing Cooperation in Hllegu Township. Phase one of the project is expected to utilise 127 hectares out of 224 hectares allocated for the complex and have areas dedicated to small, medium and large enterprises, employee housing, a training school, park, and business-related services. USD 110 million has been allocated for the project which is expected to take five years to complete. Upon completion, the MoC projected that between 50,000 to 100,000 jobs will be created.
  - **Ngwe Pin Le Integrated Logistics Zone and IWT project:** YRG is planning to construct an integrated logistics zone and inland water transport (IWT) system west of Yangon city. The project is situated about 20 kilometres north of Yangon Central Business District and located on 224 acre greenfield site with direct access to the river. It is in close proximity to major industrial zones in Yangon including Hlaing Thiyar, Ngwe Pin Le, Shwe Lin Ban and Shwe Pyi Thar. When completed, the project is expected to improve hinterland logistics shortfalls and reduce road congestion and transportation costs between ports in Yangon.
At the 2018 Yangon Investment Forum, YRG unveiled plans for 11 new industrial zones across 11 townships on the outskirts of Yangon. The aim of these new zones is to reduce development gaps among townships as well as provide jobs for local citizens. The locations of the new industrial zones include Hmwabi, Taikkyi, Hlegu, Htantabin, Twante, Kawkmu, Kunchangon, Thanlyin, Kyauktan, Kayan and Thongwa townships. They range in size from 750 to 1,871 acres.

New Yangon City: YRG launched the New Yangon City Project in March 2018 to address the needs of the growing population in Yangon. The project will be implemented by New Yangon Development Company Limited (NYDC), an incorporated company that is 100% owned by YRG. The total area of the project is 1,500 square kilometres (30,000 acres) to the west of Central Yangon across from Kyee Myin Daing Township. Phase I will be developed on 20,000 acres of land. The estimated cost for phase I infrastructure is USD 1.5 billion and will include the following:

- Five village townships
- Two bridges NYC to Central Yangon
- 26 kilometres of artery roads
- 10 square kilometres of industrial estates
- Power plant, transmission, distribution facilities
- Water and wastewater treatment plants

In May 2018, NYDC signed an agreement with Chinese state-owned China Communications Construction Company to prepare a detailed project proposal to develop this infrastructure. This is to be procured under a “Swiss Challenge”.

Stakeholders

- MoC: responsible for the country’s construction and maintenance of infrastructure.
- MoI: responsible for promoting industry expansion and ensuring viability of state-owned enterprises.
- YRG: promotes, develops and upgrades industrial zones.
- YCDC: controls and manages the local industrial zones in Yangon.
- MIC: responsible for verifying and approving investment proposals and regularly issues notifications about sector-specific developments.
- Myanmar Economic Corporation (MEC): one of the two major conglomerates and holding companies operated by the Myanmar military and founded in 1997.
- Myanmar Industries Association: a self-funded non-profit private body founded in 1993 to promote, represent and safeguard the interests of the Myanmar industries and business community.

Conclusion

A large number of industrial zones are operational or have been planned across Yangon. YRG has started work on upgrading the 29 existing industrial zones and will be facilitating the creation of shared infrastructure, power, water and waste management services to these sites to attract investors.

The regulatory framework that covers industrial zones is developing, but more needs to be done to ensure consistency across the sites. In acknowledgement of this, the MoI is working on drafting an industrial zone law to standardise the construction and management of industrial zones.
Inner City Transport
Sustainable inner city transport to provide mobility and accessibility for Yangon’s residents

Union vision: In 2013, the National Transport Master Plan (NTMP) identified a total of approx. USD 26 billion comprising of USD 11.7 billion of road projects, USD 6.6 billion of railway development, and USD 8.5 billion of inland water, sea and airport projects. In 2016, the Asian Development Bank (ADB) estimated that Myanmar requires up to USD 60 billion through to 2030 to upgrade its transport infrastructure. The ADB recommended increasing transport sector investments from 1% of GDP to 3-5% of GDP. The immense funding requirements will rely heavily on private sector resources due to a lack of substantial government reserves. The infrastructure spending need is a real opportunity for the private sector and essential if Myanmar is to fulfil its potential.

Yangon vision: Transport demand has increased in Yangon due to the rapid pace of economic development and rural-urban migration. The increase in vehicles has also put pressure on the road system that is currently not designed to support Yangon’s current needs, let alone that in the coming decades.

In response to this need for improved transportation, a sustainable transport network for the Yangon Region is being developed to position the city as a competitive national and regional hub whilst also providing much needed improved mobility and accessibility for the people. Within Yangon, key projects include upgrading the colonial rail lines, building Mass Rapid Transport (MRT systems), consolidating bus lines, building new ring roads, and upgrading domestic airports. Importantly, bridging the mobility gap between high and low income individuals will need to be prioritised. In this regard, YRG is aiming to increase traffic carrying capacity through low-cost traffic management plans, and will improve safety by lowering the average speed of commuters in peak hours.
At a glance
• Myanmar’s transport infrastructure lags behind the rest of Southeast Asia due to decades of underinvestment. According to ADB, 60% of trunk highways and most railways need urgent maintenance and significant rehabilitation.
• This underinvestment is due to the fact that Myanmar has only invested between 1% to 1.5% of GDP into transport infrastructure between 2005 and 2015 whereas countries at a similar level of development typically invest 3% to 5% of their GDPs in their transport infrastructure.
• Despite a lack of funds, significant progress has been made in recent years. Between 2004 and 2014, the Department of Highways added more than 10,000 kilometres of new trunk roads and Myanmar Railways has nearly doubled its rail network since 1990 to reach 6,110 kilometres in 2017.

Overview of transport in Yangon

Rapid economic development has caused an increase in the number of automobiles. The number of registered private cars more than doubled from 2012 to 2016. The strict regulation on importing second-hand vehicles and the banning of motorcycle usage in Yangon City has led to a greater reliance on public transportation.

Roads:
• The road network is dependent on a limited number of major roads (i.e. four North-South roads) connected by a fine network of narrow and winding streets with an average road width of only 4.6 meters, which is narrow by international standards.
• The majority of highways connecting with Yangon are in poor condition as a result of limited maintenance and investment. Even though the highway network around Yangon constitutes a large share of national traffic, it receives limited investment and most highways operate at levels that exceed capacity.
• The Yangon River is a key transport artery. As such, a water bus service was launched in October 2017 offering a new transport option to the city’s residents.

Rail network:
• There are 148.3 kilometres of railway lines and 58 rail stations in the Yangon Region. This includes the Circular Railway—a large 47.5 kilometre loop around the city, two main lines to Pyay and Mandalay with commuter rail functions (about 50 kilometres), and single track branch lines. This network is extensive but only the main lines run frequent services.
Bus services:
- In January 2017 the Yangon Region Transport Authority (YRTA) launched Yangon Bus Service (YBS) effectively replacing the Yangon Region Supervisory Committee for Motor Vehicles as the main agency responsible for overseeing public bus transport.26
- Significant changes were implemented by YBS. The number of routes as well as total number of public buses operating in Yangon were reduced, including the decommissioning of older buses. Fares were standardised and capped at MMK 200 (USD 0.15), while the total number of private companies operating bus services was reduced to eight. All these bus services are operating under a PPP model.
- 1,000 new buses were purchased from China for USD 56 million and added to the YBS system in 2017.

Key Developments – Implementing the Vision
- According to Notification No. 15/2017 by the Myanmar Investment Commission, there is no longer any restriction on transport-related investments by foreign investors, provided an approval from the MoTC is received. This dramatically reduces the amount of time required for approvals, and gives foreign investors greater flexibility as they no longer need to partner with a local company.

Highway upgrades and road decongestion:
- Upgrades to the Yangon-Mandalay Expressway will see the entire road repaved with asphalt before 2021.
- With assistance from the ADB, a 64 kilometre stretch of road near Yangon will be expanded to four lanes and outfitted with modern safety equipment.
- A traffic command centre built to help alleviate Yangon’s chronic road congestion officially opened for operations in May 2017.
- Yangon-Pathein Highway project is an upgrade currently being delivered under a BOT model by Oriental Highway Company, a local company.

Water bus services:
- In October 2017, Yangon launched a water bus service with Tint Tint Myanmar Co., Ltd, starting with five ships for phase one. The initiative falls under YRGs plan to upgrade public transport services to relieve traffic jams.
- Feedback on the water bus service has been generally positive, but a lack of connectivity with other transport services in the city has proved to be a challenge.
### Current major transport projects for upgrade or construction

<table>
<thead>
<tr>
<th>Project</th>
<th>Investment</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yangon Circular Railway project upgrade</td>
<td>USD 301 million</td>
<td>The project is divided into two parts. The east section is being delivered by local contractor Shwe Taung and the west section by local company A1 Group in joint venture with China’s Sinohydro Corporation. The existing fleet of rolling stock is to be replaced by 66-electric multiple unit carriages between 2020 and 2022.</td>
<td>Upgrade ongoing</td>
</tr>
<tr>
<td>Yangon-Mandalay Railway Update</td>
<td>USD 249 million</td>
<td>This project aims to improve capacity of the railway line by rehabilitating and modernising the existing railway and related facilities from Yangon to Toungoo.</td>
<td>Upgrade ongoing</td>
</tr>
<tr>
<td>Yangon Central Railway Station</td>
<td>USD 2.5 million</td>
<td>Redevelopment of the Yangon Central Railway Station into a mega mixed use development and a new terminal station.</td>
<td>Tender awarded in Q1 2018 to Singapore-listed Oxley Holdings and its consortium (includes Myanmar’s Min Dhama and China’s Sino Great Wall). Contract negotiation is ongoing.</td>
</tr>
<tr>
<td>Yangon Elevated Expressway</td>
<td>USD 1.5 billion</td>
<td>A 47.5 kilometre elevated ring road that will connect downtown, Yangon Port, Yangon International Airport and Mingalardon industrial zone</td>
<td>In December 2018, 10 consortiums were shortlisted in the pre-qualification phase. Pending issuance of Request For Proposal.</td>
</tr>
</tbody>
</table>

### The future of transport in Yangon

<table>
<thead>
<tr>
<th>Asset</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Mass Rapid Transit (UMRT)</td>
<td>UMRT North-South Line connecting CBD with Yangon International Airport via Yangon Central station and Mindama sub-centre will be installed as first metro in Yangon. There are also plans for a UMRT East-West Line.</td>
<td>Planning stage</td>
</tr>
<tr>
<td>San Kyi Wa Transportation Hub</td>
<td>This project is introduced to develop a transportation hub linking YBS buses and circular rails to ease the road congestion.</td>
<td>Planning stage</td>
</tr>
<tr>
<td>Outer Ring Road</td>
<td>The objective of the project is to improve logistical efficiency in Greater Yangon by developing the eastern section of Yangon Outer Ring Road.</td>
<td>Planning stage</td>
</tr>
</tbody>
</table>
In focus: Yangon Elevated Expressway Project

The Yangon Elevated Expressway Project sponsored by MoC, is one of the priority projects of the Union Government.

This 47.5 kilometre project will be carried out through a long-term PPP with the MoC being the direct counterparty in the Concession Agreement. It is estimated to cost around USD 1.5 billion.

Phase One of the four-lane expressway will connect Dawbon Bridge, Pazundaung Township, the Mingaladon Industrial Zone and Yangon International Airport. The aim of the project is to alleviate traffic congestion in Yangon and enhance connections across the city.

In November 2018, the MoC received 12 pre-qualification applications for phase one of the project, from local and international bidders, out of which 10 consortia were shortlisted. MoC is aiming to award the project in 2019, with construction over two to three years. MoC, with the assistance of IFC, has committed to conduct a fully transparent and competitive procurement process in line with best practice for this Project.

This project is an excellent illustration of the effort made by YRG to prioritise important and impactful projects and then procure those using transparent, globally recognised procurement processes.

Stakeholders
- YRG: chairs the Yangon Region Transport Authority.
- YCDC: in charge of local roads and urban planning.
- YRTA: currently operates Yangon Bus Service.
- MoTC: oversees the Myanmar Railways and the Road Transport Administration Department, and has legal responsibilities regarding public transport licensing, which it chooses to enact through the Yangon Region Transport Authority.
- Ministry of Construction: responsible for the country’s construction and maintenance of infrastructure, including roads and bridges.

Conclusion

It is important to establish an integrated transport system that links the water bus service, buses, trains and all other forms of public transport together. The government is currently surveying and analysing data in cooperation with international organisations such as JICA and ADB to identify transit areas, the walking distance from the port to bus stops and the types of facilities required to connect these so as to reduce congestion.

Effective transport connectivity will be a key enabler to revitalising economic growth. Growth in Yangon’s population and the ongoing concentration of activity in the Yangon region creates an enormous incentive for YRG to accelerate investment across the transport network. A multi-modal approach such as Transit Oriented Development currently being promoted by YRG will require very significant levels of private sector and government funding utilising a broad range of procurement tools and commercial structures.
Railway Line Maps – Now, and the Future

Source: SUDP, JICA(2013)

Yangon Elevated Expressway

Source: JICA, YCDC
**Power**

A stable electric power supply of high quality and sufficient quantity for industrial development and supporting urban functions.

**Union vision:** Today, Myanmar has one of the lowest electrification rates in the region with electricity consumption per capita of 276 kWh in 2017, as compared to 348 kWh in Cambodia; 778 kWh in Philippines; 2,654 kWh in Thailand and 4,707 kWh in Malaysia.

Electricity production has increased from 3,443 MW in 2010-11 to 5,400 MW in 2016-17. In January 2018, the Ministry of Electricity and Energy revealed the power production plan for 2018 to 2022: 439 MW from three new power plants to be built in 2018; 750 MW from four power plants to be built in 2019; 260 MW from three power plants planned in 2020; 971 MW from five power plants planned in 2021; and 891 MW from five planned power plants in 2022. Myanmar has plans to further increase its power-generating capacity from 5,400 MW to more than 29,000 MW by 2030 through the development of 41 new power plants. This represents a very significant investment, the majority of which will need to come from the private sector.

In response to this need, the National Electrification Project will expand national and off-grid electricity to provide more than 7.2 million homes with electricity, contributing to Myanmar’s vision of providing 100% electrification by 2030. Power generation will be competitively priced, and the majority of energy will be generated from renewable sources.

Unlike many developing countries, Myanmar has not taken the easy route of relying on coal fired power plants. Electricity generation from hydropower is a key part of the long term plan for Myanmar’s energy needs. Myanmar has rich hydropower potential with an estimated resource total of 108 GW, of which only 3 GW has been developed so far. Installed hydropower capacity is planned to triple to reach 9 GW by 2030. The top 5 power plant by capacity is show in the map beside:

<table>
<thead>
<tr>
<th>S/n</th>
<th>Power plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yeywa hydropower plant (790 MW)</td>
</tr>
<tr>
<td>2</td>
<td>Shweli hydropower plant (600 MW)</td>
</tr>
<tr>
<td>3</td>
<td>Paunglaung hydropower plant (280 MW)</td>
</tr>
<tr>
<td>4</td>
<td>Dapein hydropower plant (240 MW)</td>
</tr>
<tr>
<td>5</td>
<td>Mingyan gas fired power plant (225 MW)</td>
</tr>
</tbody>
</table>
Yangon vision: The vision for Yangon is to provide a stable and high quality electric power supply to support all urban and industry functions. Yangon consumes almost half of the domestic power generated in Myanmar. According to the data collected by Ministry of Electricity and Energy of Yangon Region as of September 2017, approximately 80% of total households in Yangon are electrified.\textsuperscript{28}

As the Union-wide plans are based on implementing the National Electrification Project that largely focuses on providing rural areas with initial access to electricity, YRG is supporting this by addressing the existing electricity access issues in Yangon Region. Consistent supply of full-voltage electricity will be a priority in improving the civil works and operations of the city and the industrial zones in the region. Greater production levels of electricity are needed to meet residents’ needs and provide favourable conditions to attract foreign investors. In Yangon, voltage fluctuations and losses of voltage in the dry season are being addressed via plans to extend the current power stations, namely Thilawa and Kun-chan-kone. Other power stations currently in operation are Hlawga, Ywama, Ahlone and Thaketa. YRG aims to develop a full portfolio of power generation, utilising conventional power generation, as well as the development of solar, wind and waste to energy power solutions.

When more consistent full-voltage electricity is available, Yangon will be in a better position to upgrade industrial zones and enhance economic and industrial growth. Presently, the lack of stable electric connections is a major barrier for foreign and local companies wanting to establish manufacturing bases. YRG is focused on addressing the power outages in industrial estates that are costing manufacturers and negating the advantage of a low cost workforce. The map below shows the existing and proposed power plants. The current operational power plants are: Hlawga (152 MW, 50 MW), Ywama (310 MW, 52 MW), Ahlone (154 MW, 121 MW) and Thaketa (92 MW, 50 MW), Thilawa (50 MW).

<table>
<thead>
<tr>
<th>Description</th>
<th>Qty</th>
<th>Installed Capacity (MW)</th>
<th>Myanmar Power System</th>
<th>Foreign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydropower</td>
<td>24</td>
<td>3,011.0</td>
<td>2,490.0</td>
<td>521</td>
</tr>
<tr>
<td>Gas-fired</td>
<td>14</td>
<td>1,520.3</td>
<td>1520.3</td>
<td>–</td>
</tr>
<tr>
<td>Coal-fired</td>
<td>1</td>
<td>120.0</td>
<td>120.0</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>4,651.3</td>
<td>4,120.3</td>
<td>521</td>
</tr>
</tbody>
</table>
At a glance

- Myanmar is rich in energy resources, with hydropower and natural gas being the main sources of power.
- Myanmar has one of the lowest electrification rates in Southeast Asia, with only 38% of the population having access to electricity in 2017. The government aims to electrify 100% of Myanmar’s households by 2030.
- As of 2017, Myanmar reached an installed capacity of 5,402MW. However, available capacity is reported as being far lower at approximately 3000MW. This is due to various reasons including old equipment, leakage, losses in transmission, inadequate metering and theft. In addition, during dry season, hydro electricity generation reduces and does not run at capacity.

Overview of power in Yangon

- The electrification rate in Yangon Region is approximately 80%, which is a strong contrast to the rest of the country.
- Yangon Region receives power from plants in Ahlone, Hlawga, Ywama, Thilawa and Thaketa, with total installed capacity of 1,034 MW.
- In 2014, the government outlined a National Electrification Plan (NEP) as a roadmap to deliver universal access to electricity by 2030. This requires significant investment across generation and distribution assets.
- Due to rapid economic growth, Yangon City faces electricity shortages and YRG is committed to providing stable electricity and energy supply to meet increasing demand for residential, commercial and industrial development.
- As of 2017, Myanmar reached an installed capacity of 5,402MW. However, available capacity is reported as being far lower at approximately 3000MW. This is due to various reasons including old equipment, leakage, losses in transmission, inadequate metering and theft. In addition, during dry season, hydro electricity generation reduces and does not run at capacity.

The future of power in Yangon

The Yangon Region is expected to require 3,000MW of electricity by 2022 according to the Yangon Electricity Supply Corporation (YESC). That amount is twice the current demand in Yangon and is equivalent to the amount of electricity currently being generated for the whole of Myanmar. This represents an increase of up to 15% per year over the next four years. To meet this demand, MMK 1 billion (USD 659,000) worth of infrastructure, including substations and transmission lines, will be needed for each additional MW of electricity generated.

<table>
<thead>
<tr>
<th>Project</th>
<th>Investment</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste to energy plant in Yangon city (0.76 MW)</td>
<td>USD 16.2 million</td>
<td>The 0.76 MW output plant has a capacity to treat 60 tonnes of waste per day and has been designed and built using state-of-the-art technology developed by JFE Engineering Corporation.</td>
<td>Operational</td>
</tr>
<tr>
<td>Ahlone LNG plant (388 MW)</td>
<td>USD 350-500 million</td>
<td>MoEE issued a Notice to Proceed to the developer, Toyo Thai Power Myanmar Co Ltd, in early 2018 for this LNG project in Yangon. This project is anticipated to take 28 months to complete.</td>
<td>Under development</td>
</tr>
</tbody>
</table>
Key Developments – Implementing the Vision

Policy reforms:
- In 2016, the Union Government merged the Ministry of Energy and Ministry of Electric Power into the new Ministry of Electricity and Energy (MoEE). The MoEE is now the body responsible for oil and gas, and electricity operations.
- A new Electricity Law was enacted in October 2014 to encourage more local and foreign participation in power sector investments. Under the new law, regional and the state governments can issue permits for small-scale (up to 10 MW) and medium-scale projects (up to 30 MW). The MoEE remains the sole approver of permits for large-scale power plants or plants connected to the national power grid.
- In April 2017, MIC notification 15/2017 passed allowing 100% foreign investment in all electricity projects, irrespective of size. Considering the scale of demand and the government’s plans to roll out 24,000 MW across Myanmar by 2030, this offers a real opportunity for foreign investors.
- In June 2018, the MoEE started the process of reviewing the terms and conditions of Myanmar’s existing oil and gas Production Sharing Contracts. The aim of this review is to attract new investments into the oil and gas exploration sector in Myanmar.
- The government recognises that FDI and investments from the private sector are fundamental for the development of the power sector. To strengthen institutional arrangements for increased private sector participation, the government has taken initial steps to facilitate the financing of power investments through various private sector participation schemes and through the provisions in the new Electricity Law. The provisions include, among other things, identification of required institutions and their own distinct and respective functions, preparation of a national electricity master plan, formulation of grid codes, and development of a framework or of model power purchase agreements for small and large power generation projects.

Public Private Partnership Frameworks:
- In December 2017, the ADB and MoEE collaborated to develop a PPP framework for the power sector.
- Sembcorp Myingyan Independent Power Plant’s (IPP) opening marked the successful delivery of the first competitively-tendered IPP in the country, and demonstrated the success of Myanmar’s new PPP model. The 225 MW Myingyan Combined-Cycle Gas Turbine (CCGT) power plant is the largest gas-fired IPP in Myanmar. It is developed in Taungtha, a township of Myingyan district in Mandalay, and commenced full commercial operation in October 2018. The plant adds significant capacity to the State owned Electric Power Generation Enterprise (EPGE), and supports Myanmar’s continued economic development and power needs. The USD 300 million project was structured based on internationally accepted precedent with financing from a consortium of international lenders, including ADB, IFC, Clifford Capital, DBS Bank, DZ Bank and OCBC.
- Myanmar plans to increase its power-generating capacity from 5,400 MW to over 29,000 MW by 2030. As part of this effort, 26 power projects with a combined capacity of 6,487 MW sourced from hydro, thermal and solar sources are in the pipeline. This will be delivered through public and private joint ventures with local and foreign companies, as well as development assistance aid and low-interest financing from international financial institutions.
### Preliminary Development Plan

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Planned Power plants</strong></td>
</tr>
</tbody>
</table>

| Development of power stations | MoEE is considering options to import Liquefied Natural Gas (LNG) as fuel for power generation. Parallel planning and implementation of new gas fired power plants utilising imported LNG is the key for power supply to the Yangon region in the medium term. The forecast increase in electricity supply will require the government to ensure the security of feedstock for the new power stations, a challenge currently being addressed by MoEE. |

| Improvement of Transmission/Distribution Lines and Substations | The authorities are focused on reducing transmission and distribution loss caused by the ageing national grid. Construction of 500 kV main transmission lines and related 500/230 kV substations are under way. A total of two main transmission lines are to be constructed with the help of Japanese ODA funding. The 500 kV transmission system is essential to transmit electricity from the north where it is generated across the long distance to the south, including Yangon, where the major load centre is. The upgrading of distribution lines and substations from 33 kV to 66 kV is necessary to modernise Yangon’s distribution network. The improvement of distribution lines and substations funded by ADB is being executed at Mayangone Township, Kamaryut Township, Hlaing Tharyar Township, Mingalardon Township, and Hlaing Township. In addition, JICA is planning to carry out improvements to the distribution lines for 11 townships, and improvement of substations for four townships in Yangon City. |
Stakeholders
• MoEE: responsible for oil and gas and electricity operations. The MoEE owns about 75% of the total installed capacity of Myanmar.
• YESC: responsible for electricity distribution in Yangon area.

Conclusion
Reliable power is critical to economic growth and the development of emerging market economies into robust mature economies. Myanmar has a significant power generation shortfall and a fundamental electrification challenge. Although Yangon has a higher electrification rate than the rest to Myanmar, there remains a very substantial shortfall in the short, medium and long term.

As Yangon’s population swells, the middle class develops and its economy grows, there will be increasing demand on Yangon’s electricity generation capability. The introduction of PPP structures and regulatory return offers significant opportunity across the power market- from conventional gas fired power to renewable energy, investment in the broader electricity grid and the use of mini grids to satisfy local and industrial needs.
Union vision: One of the goals of the MSDP is to ensure that quality of life considerations such as water management are integrated fully into urban planning frameworks. This is in line with the National Water Policy (NWP) as it focuses on Integrated Water Resources Management. Besides that, the NWP aims to increase efficiency and accountability of service providers in the water sector.

Through the High Level Round Table held in Yangon on 24th May 2016, it was concluded that the country needs investments into the water sector in order for it to achieve its vision of becoming a water efficient country. This includes investments into water supply and sanitation, personal hygiene, environmental cleanliness, navigation, water transport, irrigation and hydropower.

Yangon vision: The vision for Yangon is to provide safe and clean water to its residents. The YRG plans to enhance its water supply service by expanding water treatment facilities and improving distribution networks, thereby contributing to improvement in the living environment of residents in the Yangon Region. The map below shows the existing plants and new opportunities in Yangon Region.
At a glance
- Myanmar has abundant water resources with mean average rainfall of approximately 2,100 millimetres; ranging from as high as 5,000 millimetres along the coastal areas to less than 1,000 millimetres in the central dry zone.
- The water endowment (total sustainable water volume per inhabitant) is 24,000 cubic metres per year. The total water withdrawal is less than 5% of the renewable resources available.

Overview of water in Yangon
- In the Yangon City, water supply comes from reservoirs (92%) and ground water (8%). This met approximately 40% of demand in 2017. The average water service hours per day are currently 13 hours and expected to increase 24 hours by 2025.
- Approximately 60% of water in Yangon is NRW. The high level of NRW water represents substantial revenue forgone to YCDC as water produced is not paid for due to theft, leakage and losses in distribution. YCDC plans to reduce the NRW rate in Yangon to 35% in 2025 and 15% in 2040.
- Reducing the NRW rate will enable more funding for system upgrades, operations, maintenance, additional investments, energy and disposal.
- In Yangon, water tariff is charged monthly on an estimation basis.

Key Developments – Implementing the Vision
- To improve the living environment and economic development of Yangon City, water supply service improvement, new water treatment plant construction, and rehabilitation of associated transmission and distribution facilities are underway.
- The National Water Resources Committee (NWRC) was established in 2013 and is responsible for implementing an integrated water management system, developing a national integrated water management strategy and water resources policy, and implementing a water framework directive and a water law.
- There have been projects targeting NRW in Mayangone, Yankin, Insein, South Okkalapa, North Okkalapa, Thingangyun and Tamwe Townships through international cooperation with JICA, AFD and EGIS from France.
- JICA is supporting a Technical Assistant Team for the improvement of Water Supply Management in Yangon over two phases. Phase one ran between July 2015 to March 2017 and phase two is currently underway (April 2017 to June 2020). The project involves construction of two water service reservoirs, installation of water transmission and distribution main pipelines and construction of five chlorination facilities funded by Japanese ODA loans.
- In June 2017, the World Bank granted a USD 116 million International Development Association (IDA) commitment for the Myanmar Southeast Asia Disaster Risk Management Program (2017-2023). This will help improve drainage services, improve the structural performance of selected public facilities in Yangon, and enhance the capacity of the government to facilitate disaster response. The project includes five components of which one component (Urban Flood Risk Management) will help reduce Yangon’s flood risk by improving and increasing the capacity of drainage infrastructure and introducing reactionary programs.
In focus: Manila Water Company
Manila Water Company has successfully completed its pilot project in the townships of Insein and South Okkalapa in Yangon. In partnership with Mitsubishi Corporation and YCDC, the project included the formation of district metering areas, technical and non-technical surveys, system loss or NRW reduction and management, among others.

As a direct result of this project, NRW in Htan Pin Gone in Insein Township was reduced from 52% to 17% and in South Okkalapa Township NRW decreased from 57% to 12%.

The recovered water was brought back into the system, increasing water pressure by two PSI and improving the access of water supply to nearly 4,000 residents. Registered billed volume has doubled with the replacement of water meters, increasing revenues for YCDC.

Existing water supply

<table>
<thead>
<tr>
<th>Asset</th>
<th>Description</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gyobyu</td>
<td>Reservoir, 27 million of gallons per day (MGD)</td>
<td>In operation</td>
</tr>
<tr>
<td>Phygyi</td>
<td>Reservoir, 54 MGD</td>
<td>In operation</td>
</tr>
<tr>
<td>Hlawga</td>
<td>Reservoir, 14 MGD</td>
<td>In operation</td>
</tr>
<tr>
<td>Ngamoeyeik (Phase 1)</td>
<td>Reservoir, 45 MGD</td>
<td>In operation</td>
</tr>
<tr>
<td>Ngamoeyeik (Phase 2)</td>
<td>Reservoir, 45 MGD</td>
<td>In operation</td>
</tr>
<tr>
<td>YCDC Tube Wells</td>
<td>452 tube wells, 16 MGD</td>
<td>In operation</td>
</tr>
</tbody>
</table>

The future of water in Yangon

- As part of JICA’s Greater Yangon Water Supply Improvement Project Phase I, implementation of Lagyunpyin WTP is underway to supply water to 590,000 people in four new Dagon Townships (Zone 7 and 8) together with water transmission to Thilawa SEZ (42,000 m3/day).
- The project consists of five different packages for two water service reservoirs, installation of water transmission and distribution main pipelines and five chlorination facilities. It will be delivered from 2018-2022 with financing from a Japanese ODA loan and development counterpart funds from the Myanmar government. The private sector contractors include a mix of local and foreign investors.
- In addition, Greater Yangon Water Supply Improvement Project Phase II, the construction and rehabilitation of transmission facilities and distribution facilities in Zone 1 (CBD) and Zone 9 (Hlaingtaryar Township) is planned for implementation. This network will be supplied with treated water from Kokowa WTP phase 1 (60 MGD) by 2025.
- YCDC is also conducting a feasibility study for the Toe Myit water supply project with the aim to supply 120 MGD upon completion.
Stakeholders

- YCDC’s Engineering Department (Water and Sanitation): responsible for the supply of clean and potable water to the citizens of Yangon City and sewerage and sanitation facilities in the city.
- NWRC: responsible for implementing an integrated water management system, developing a national integrated water management strategy and water resources policy, and implementing a water framework directive and a water law in Myanmar.
- Irrigation and Water Utilisation Management Department: responsible for sustainable operation and maintenance of irrigation, flood protection and drainage facilities in the country.

Conclusion

Water is a critically important resource for any region or country. A robust commercial structure, clear objectives, and innovation and funding from the private sector, can greatly improve a region’s water efficiency.

NRW and system wide inefficiencies will impact the long term development of Yangon Region and hence YRG is addressing these issues head on with the combined support of the multilateral banks, JICA/ JBIC and the private sector. Private sector capital and capacity will be needed to deliver sustainable water solutions to Yangon Region.
Union vision: Myanmar is looking to liberalize key industries and its ongoing efforts will positively impact the demand on real estate. Tourism is booming in Myanmar. With the growth in tourism and commercial activities, the government’s progress on legislation and financing options will provide an impetus to encourage more sales going forward, particularly in the mid-range market.

Yangon vision: Yangon has the vision to continue as the go-to destination for affordable city living and also position itself as one of the top cities in ASEAN. The booming economy, change in consumer patterns and rising incomes are attracting numerous international brands to set up shop in Yangon. With the government working through the regulatory concerns and liberalising the real estate market, we would expect sustainable growth across the Yangon Region as the city expands and grows. The map below shows the existing and future commercial real estate projects in Yangon Region.
Overview of commercial real estate, retail and hospitality in Yangon

Retail
- At the end of 2018, Yangon’s retail stock reached more than 400,000 square metres of leasable space, up 24% YoY from 2017. Occupancy rates are expected to remain above 90% through to 2020.
- The continuous entry of foreign brands coupled with aggressive expansion of local chains will continue to buoy the overall take-up rate. The recent relaxation of the trading restrictions by the Ministry of Commerce allowing 100% foreign ownership of businesses operating in the wholesale and retail sectors will also boost investment.
- The major urban centres in Yangon have seen significant investment in retail developments, while the retail spaces in outer cities such as Kyee Myin Daing, Ahlone and Mayangone remain limited.
- A number of new retail malls were completed in 2018 including Kantharyar Shopping Mall by Asia Myanmar Shining Star Investment, phase one of The Central Boulevard by Marga Landmark, and Space integrated retail component by Crown Roofing offering an additional 58,000 square metres of stock to the market.
- Supply is expected to continue to increase in 2019 with new developments becoming more innovative and offering contemporary and forward-thinking designs to attract customers and tenants. Key projects include Fortune Plaza, Yadanar Mall, One Shopping Mall, Secretariat Retail and Central Boulevard.

Office Space
- Yangon office stock reached more than 380,000 square metres at the end of 2018, up 9% YoY, with the citywide occupancy rate at approximately 72%. In the third quarter of 2018, the average citywide rental office rate in Yangon was USD 42.10 per square metre per month, down 2% on a quarterly basis and 7% on a yearly basis.
- The Yangon office pipeline remains healthy with new international standard office complexes offering more than 220,000 square metres of leasable space scheduled for completion by 2021. This includes major projects such as Time City office tower, M Tower, Yoma Central, HAGL Tower 3 and 4.

Hotels
- Foreign investment in hotels and commercial complexes in Myanmar has increased from USD 1.4 billion in 2012 to USD 4.4 billion in 2017 on the back of a surge in tourism.
- 12 upper-scale hotel projects are expected to be completed by 2022, supplying more than 3,100 additional hotel rooms.
- The hospitality industry in Myanmar is growing rapidly. There are currently more than 1,400 hotels, motels and inns nationally and Yangon is home to 350 of these, offering a total of 18,000 rooms.
- Yangon upper-scale hotel stock reached more than 5,000 rooms at the end of 2018 with the citywide occupancy at 47%. Foreign hotel brands including Hilton, Mercure, Kempinski, Amara, Melia, Lotte, Pan Pacific, Novotel, Shangri-La, Orient-Express, Sedona, Best Western and Wyndham Grand have already opened in Yangon.

At a glance
- Since the start of the political and economic transition in 2011, Myanmar's real estate industry has seen a surge in both local and foreign investments. With the slowdown in FDI demand driven growth is expected to moderate. The increase in the supply of commercial real estate has moderated rental rates to levels more consistent with those of developing countries.
- Real estate development will provide opportunity for investment across Myanmar in three primary areas: hotels, offices, and retail properties. Each has the potential for significant growth in the coming years, both in major metropolitan areas like Yangon, Mandalay and Nay Pyi Taw, as well as more rural parts of the country.
- The commercial market is becoming more competitive with tenants increasingly seeking quality in addition to affordability and location.
Key Developments – Implementing the Vision

- In 2013, the Ministry of Hotels and Tourism unveiled a Tourism Master Plan that earmarked various projects to develop human resources and tourism-related infrastructure. The master plan aims to bring in 7.5 million visitors to Myanmar in 2020. The tourism industry is one of the key sectors being promoted to foreign investors under the MIL who are permitted to engage independently in hotel developments of three-stars or higher standard.
- Further, YCDC has embarked on plans to redevelop local markets such as the Mingalar market that is expected to be opened in 2020. Past projects included the rebuild of Thingangyun Market and redevelopment of Bogyoke Aung San Market.

Examples of existing commercial real estate, retail and hospitality projects in Yangon

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Developer</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mixed-use (a 20 story hotel, a 27 story extended stay hotel, and commercial facilities)</td>
<td>Yankin Township, at the junction of Sayar San Street and Yankin Street</td>
<td>Kajima Corporation</td>
<td>Under construction</td>
</tr>
<tr>
<td>Y Complex Mixed-use (Okura Prestige Yangon Hotel)</td>
<td>At the intersection of Shwedagon Pagoda Road and U Wisara Road</td>
<td>Fujita Corporation, Tokyo Tatemono Co, Japan Overseas Infrastructure Investment Corporation, Yangon Technical &amp; Trading Co</td>
<td>Under construction</td>
</tr>
<tr>
<td>Yoma Central Mixed use project (a five-star luxury hotel, two grade A office towers, serviced apartments, retail complex and a commercial hotel)</td>
<td>At the junction of Sule Pagoda Road and Bogyoke Aung San Road</td>
<td>Yoma Strategic, FMI, Mitsubishi, IFC and ADB</td>
<td>Under construction</td>
</tr>
<tr>
<td>Myanmar Center Phase 1</td>
<td>Mixed use</td>
<td>Hoang Anh Gia Lai (HAGL) Group</td>
<td>Operational, expansion in progress</td>
</tr>
<tr>
<td>Junction City</td>
<td>Mixed use (office, hotel, retail and serviced residences)</td>
<td>Shwe Taung Group, Singapore’s Keppel land, Pan Pacific Hotels Group and New Asia Investments</td>
<td>Operational, expansion in progress</td>
</tr>
<tr>
<td>Kantharyar Center</td>
<td>Mixed use (office, hotel, serviced apartments, shopping center and residential units)</td>
<td>Asia Myanmar Consortium Development and Hong Kong Shining Star Investment</td>
<td>Operational, expansion in progress</td>
</tr>
<tr>
<td>Lotte Hotel</td>
<td>Hotel and serviced apartments</td>
<td>IGE Group and POSCO</td>
<td>Completed in 2017</td>
</tr>
<tr>
<td>Vantage Tower</td>
<td>Office tower</td>
<td>Myint and Associates</td>
<td>Completed in 2016</td>
</tr>
<tr>
<td>Sule Square Tower</td>
<td>Retail and office space</td>
<td>Shangri-La Group</td>
<td>Completed in 2016</td>
</tr>
</tbody>
</table>
The future of commercial real estate, retail and hospitality in Yangon

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
</tr>
</thead>
</table>
| Eco Green City                | • An Eco Green City covering 1,400 acres of land in Yangon’s Hlegu Township is being planned for development within 10 years. The total investment required for this project is estimated at nearly USD 2 billion.  
• The project consists of 2 phases: Phase one includes low cost housing, a transportation terminal, government administration offices and shopping malls. Phase two includes an international hospital, school, hotel zone and public recreational spaces.  
• The project commenced in December 2017 and will be developed by the Local Alliance Start Group of Companies together with MoC. |
| New Myanmar Convention Centre | • First Myanmar Construction Co., Ltd (“FMC”) was awarded a 50+10+10 year long term land lease for a 36.5 acre site, located at the corner of Min-Dhama and Taw Win roads.  
• It is within 10 min drive of Yangon International Airport, and in close proximity to popular tourism points such as Sule Pagoda and Shwedagon Pagoda.  
• FMC obtained Myanmar Investment Committee (MIC) approval on 11th January 2016 to develop this land site into a mixed-use development, consisting of 3 blocks with shopping mall, convention centre, office, hotel, serviced apartment, and medical hub. |

Stakeholders

- Yangon Metropolitan Development Public Company Limited (YMD): formed by the YRG to develop and oversee projects.  
- Ministry of Hotels and Tourism (MoHT): tasked with overseeing the systematic development of the tourism industry in Myanmar.  
- Ministry of Construction’s Department of Urban and Housing Development (DUHD): responsible for national urban planning and enforcing housing policies and guidelines.  
- Ministry of Commerce: primary government entity responsible for trade development and policy-making within Myanmar, with a mandate to encourage private sector participation in economic development, expand international trade activities and agreements, and write policy regarding foreign investors and companies.  
- Ministry of Investment and Foreign Economic Relations: new authority tasked with streamlining foreign investment processes, promoting Myanmar as an investment destination and working with other government agencies to strengthen the regulatory and operational environment covering foreign firms in the market.  

Conclusion

Commercial real estate, retail and hospitality infrastructure remain an asset class in high demand across the region. As the commercial hub, business centre and gateway to Myanmar, this sector offers real opportunity for continued, sustainable growth in Yangon Region.

As the government addresses regulatory concerns and liberalises the real estate market, we would expect sustainable growth across the Yangon Region as the city expands and grows.

The influx of international investors as Yangon Region matures will create additional demand for good commercial, retail and hospitality needs of the population.

With Myanmar’s ongoing liberalisation in various sectors, ASEAN integration, the 2016 Myanmar Investment Law and 2018 Myanmar Company Act attracting foreign investment into the country, the long-term office demand prospects are expected to remain robust.
Creating a sustainable environment for growth

Support Capabilities

In addition to core infrastructure, ‘supporting capabilities’ are essential for Yangon Region to push forward in its development agenda. Without a highly productive, educated, and healthy workforce, Yangon Region will be unable to effectively utilise its core infrastructure assets. As such, local and foreign investment into supporting infrastructure in the service sectors would mobilise society and allow for sustainable growth.
Yangon vision: The large rural-to-urban migration in Yangon from other regions, has contributed to the education infrastructure gap in Yangon. The specific issue that confronts the education system is the lack of infrastructure of consistent quality across the Yangon Region. Bridging the infrastructure gap to develop a highly educated workforce is a priority for YRG. A high quality education aimed at keeping children in school can be obtained by strengthening curricula, driving innovation in the use of learning channels, and improving teacher training. The most prominent infrastructure issue facing Yangon is the lack of evenly-distributed schools in the outer-townships of Yangon. Parents wanting their children to attend schools of a higher standard, which tend to be concentrated in the Central Business District and Inner City, travel from Outer City Regions each day. By building high-standard schools in other regions, access to quality schooling will be enhanced and traffic congestion and overcrowding in the central district could be avoided.

Union vision: Goal four of MSDP, ‘Human resources and social development for a 21st century society’ targets improving equitable access to high quality lifelong educational opportunities. The benefits of the 2011 liberalisation are evident through the 351% increase in government funding allocated to education between 2011-12 and 2015-16. This funding was spent on the 7,620 schools that the Ministry of Education constructed between these years in addition to improvements made to 8,950 existing schools.

Myanmar is currently in the process of raising its standard of education, in order to expand growth opportunities for the country and capitalise on the potential of its young population. According to UNESCO, between 2011 and 2016, an average of 7,200 students left Myanmar each year to study in foreign countries. In order to avoid a national brain-drain, retain high-achieving students, and achieve improved access to high quality and lifelong education opportunities, Myanmar must promote participation in the education system. The National Education Strategic Plan 2017 was designed to guide reform in the sector through to 2021. To achieve the goals listed in the Plan, further revisions to legislation, opening the sector to additional international partnerships and investors, and continued investments in infrastructure in rural areas, is necessary.

Improved education outcomes will provide better educated students who may undertake tertiary studies. Myanmar is experiencing a shortage of skilled professionals across a number of occupations.
At a glance

- Myanmar’s education system is divided into five parts - early childhood care and development; basic education; alternative education; technical and vocational education and training; and higher education.
- The education system in Myanmar lags behind its ASEAN peers - however it is ripe with opportunity and, with the right investment can reach a similar standard to its neighbours by 2030. In fact, a 2017 survey by the Ministry of Planning and Finance in conjunction with the UN Development Programme found that literacy rates have risen, the gender gap in literacy has closed and school enrolment rates have been rising steadily.
- Funding for education in FY 2018-19 was USD 1.24 billion, a marked increase from the USD 212.2 million (MMK 300 billion) that was allocated in FY 2014-15.

Overview of education in Yangon

- In 2017, Yangon Division had 2217 primary schools, 292 middle schools and 235 higher institution with a total of 1,017,169 students enrolled across these schools.
- 68% of schools catering for the basic education sector, (i.e. primary, middle and high schools) are located in the southern and middle parts of Yangon City, with sparse numbers in the eastern, northern and western parts of the city.
- High schools in Yangon are concentrated in the CBD and Inner City Zones including Bahan, Sanchaung, Kyimyindaing and Kamaryut.
- Although pupil to teacher ratios are significantly higher in Myanmar than in neighbouring countries, there is a shortage of qualified teachers that currently hinder the education system.
- School attendance in Yangon is extremely high at the primary level (95%); remains relatively high at middle school levels (71%) but encounters a significant drop at high school level (51%).
- The number of international schools doubled between 2012 and 2017, from 25 to 50. A total of 18,373 students are enrolled in international school system, an increase of 175% since 2012.

Key Developments – Implementing the Vision

- Since liberalisation, a number of pragmatic reforms and policy changes have taken place to boost the sector. In 2012, a Comprehensive Education Sector Review (‘CESR’) was launched, in collaboration with development partners and internal and external experts. In 2013, an Education Promotion Implementation Committee was formed. These two bodies develop recommendations for education system reform, and form policies for implementation of reform, respectively. The CESR was responsible for the National Education Strategic Plan.
- Free and compulsory education was introduced in 2011 with the gradual removal of entrance fees from kindergarten and primary schools (2011), middle schools (2012) and high schools (2015). This aided an increase in student enrolments by 6%, 19% and 17%, respectively.
- The increases in enrolment have been facilitated further through the construction of 5,755 new schools in 2017; and the renovation of 7,543 existing schools in the same year.
- In 2018, the education system was liberalised with the MIC announcing that 100% foreign capital investment in the private education sector was allowed. This garnered the attention of both investors and foreign education providers given the burgeoning demand for quality education in the country. For example, in July 2018 Kaplan Myanmar University College, a subsidiary of US educational provider, Kaplan Inc, opened its first campus. It achieved enrolment of 1,000 students within its first year. This was soon followed by MIC approving a USD 52 million investment by an Asian financial investor into International Language & Business Centre, the leading K-12 private education provider in Myanmar.
Creating a sustainable environment for growth

The future of education in Yangon

- The Ministry of Education (MoE) announced the National Education Strategic Plan (NESP) 2016-2021 in 2017. Phase two of the NESP will run from 2022-2027. The vision of the NESP is to promote more equitable access and higher quality outcomes for students, by developing a national curriculum that will provide youth with a needs-driven skillset to drive a competitive, innovative and creative economy. The skills transferred to students will include knowledge, attitudes and competencies that are relevant to the needs of 21st century Myanmar.

- There is a considerable emphasis on job skills education and vocational training supported by the MoE’s Department of TVET (DTVET). The government is continuously expanding and strengthening the quality of TVET to develop the employability of graduates and ensure they have the required skills to enter the job market. In 2017 the DTVET opened 36 state-run technical high schools across the country.

- To combat the teacher shortage, estimated in 2017 to be at least 30,000 in basic education alone, the MoE is planning to train 10,000 teachers per year from June 2019.

- When implementing changes to the education system, it is important that infrastructure is in place to support these. The future distribution of schools will redress the current concentration of schools in particular areas that creates large congestion in the city for families and commuters; and difficulty for students to access schools. Schools should be organised in accordance to the land use patterns and more evenly distributed across the Yangon Region.

- The transformation of Myanmar’s education system is ongoing and requires substantial investment. The government has started to implement the NESP, while initiatives such as free education and new regulations for FDI are expected to increase enrolment and improve student performance. As the market is anticipated to expand, more creative measures will be needed to catalyse investment for education infrastructure development and teacher training. This will likely lead to further partnerships with both the private sector and foreign institutions.

Conclusion

Education of Yangon’s younger population will be the bedrock of its future success. As a newly ‘emerged’ country, the education system in Myanmar and Yangon remains well below the standard of education across other Asian countries and the world. This has been recognised by YRG.

Regulatory reform of the sector is underway and investments are being made to both the education infrastructure and teaching ecosystem (teacher, administrative and curriculum) to bring Myanmar’s education sector in line with other regions. Significant effort needs to be made to ensure students remain in school through junior, middle and high school to build up the young workforce capabilities.

An acceleration of investments into international schools will provide better incentives to attract an international workforce willing to move and reside in Yangon. At present, international education is underprovided, making it difficult for families to consider moving to Yangon.

By revamping the education sector and allowing private sector investment into the market through PPP, JV or wholly owned subsidiaries, YRG will accelerate the provision of education for students.
Healthcare

Pro-poor health services providing universal health-care

Union vision: Goal four of MSDP, ‘Human resources and social development for a 21st century society’ aims to strengthen health services systems enabling the provision of universal health care using a path that is explicitly ‘pro-poor’. The Myanmar National Health Plan (2017–2021) and the National Social Protection Strategic Plan have been developed to drive this goal. According to the World Health Organisation (WHO), life expectancy in 2016 was 65 years for men and 69 years for women. Non-communicable diseases are the largest issue facing the health sector, accounting for 68% of all deaths in 2016 (of 430,000 deaths).

Yangon vision: Yangon aims to provide equal and inclusive social services for all citizens. Yangon Region’s young population will expect better access to modern healthcare in the near future, reflecting the needs of a growing middle class. Whilst the population is currently young, Yangon will face an ageing population in a mere number of decades and must therefore prepare and develop the necessary resources to care for an ageing population in the most affordable and effective manner.

Traditional ‘brick and mortar’ development and growth, achieved by constructing hospitals and training medical professionals, will be time inefficient and expensive. Instead, technology is expected to play a part in providing advice to prevent illness, promote early detection of illness and provide medical support at alternative points of service throughout the city.

The number of hospital beds in the Yangon region must increase dramatically to accommodate the growing population, while the uneven distribution of healthcare services will need to be addressed.
At a glance

• There are two main bodies that oversee health care operations in Myanmar: the Ministry of Health (MoH) that manages the country’s entire health sector; and the Department of Public Health (DoPH) that is the regulatory body for providers, pharmaceutical firms and medical device manufacturers. The private sector and NGOs also play crucial roles in the administration of the overall health system, with the MoH estimating that the country received about USD 400 million in health related aid between 2016 and 2018.

• The government’s focus on improving the health of the nation translated into a rise in public expenditure, with 4.5% of the FY 2018-19 national budget allocated to health, a significant increase from 1% in FY 2011-12. According to the World Bank, per capita health expenditure increased dramatically from USD 15 per person in 2010 to almost USD 60 in 2015.

• MoH data reported the per capita ratio of health workers, including doctors, nurses and midwives, to be 1.33 per 1,000 people in 2016, below the minimum threshold recommended by the World Health Organisation (WHO) of 2.3 per 1,000 people.

• As at 2015, the total number of doctors in Myanmar is 33,587, which increased 6.5% compared to 2014. However, in 2015, there were 6.1 doctors per 10,000 people. The ratio is much lower compared with 11.9 in Vietnam, 19.5 in Singapore, and 12 in Malaysia.

• In 2018, Myanmar’s world life expectancy ranking was 130 (out of 194 countries) with a current life expectancy of 64.6 years for males and 68.9 years for females.

• There has been a dramatic reduction in the number of deaths of children under 5 with the number falling from 181 deaths per thousand live births in 1968 to 48.6 deaths per thousand live births in 2017.

Overview of healthcare in Yangon

• Good health is critical to human prosperity, yet the quality of healthcare in Yangon is variable with the average Yangon citizen having poor access to healthcare services.

• Maternal and infant mortality, while on the decline, still remain high, owing to inadequate healthcare infrastructure. Poor nutrition leads to an increase in illness and this directly impacts school participation rates, preventing students from attaining full academic potential.

• In 2016, the total number of hospitals in Myanmar was 1,115 with 55,895 available beds. The number of hospitals in Yangon Region was 85 with 12,260 available beds. Yangon Region’s hospitals comprise 38 public hospitals and 47 private hospitals. Yangon Region has the highest number of private hospitals compared with other 14 Regions of Myanmar.

• Major hospitals in cities such as Yangon and Mandalay already have a large pool of middle class consumers. Most hospitals in Yangon are equipped with modern healthcare devices and equipment. However, the consumers in Yangon are looking for more sophisticated healthcare services as the middle class grows.

• In 2012, Myanmar had only 0.9 hospital beds per 1000 people, significantly lower than the world wide data 2.7 beds as per World Bank. The numbers of hospital beds need to increase to accommodate the growing population in Yangon. While the number of hospitals did increase from 2007 to 2014, the number of beds per 100,000 population decreased due to high urbanisation rates.

• While there has been marked improvements in the hospitals in Yangon, development has remained focused on the city area, and has not yet spread to the outer-townships that lack access to healthcare infrastructure. The numbers of hospitals per township in the Yangon Region remains uneven. For example, in the townships of Bahan and Kamaryut situated in the inner city zones and North Okkalapa situated in the northern zone, the numbers of hospitals are significantly higher than in the other townships.
Key Developments – Implementing the Vision

- Recognising the importance of the private sector in health care provision, the government is stepping up efforts to attract FDI, with foreign players now able to own up to 70% of hospitals and medical clinics. According to the DICA, FDI in the healthcare sector jumped from USD 1.4 billion in 2013 to USD 9.5 billion in 2016.
- In June 2018 Ar Yu International Hospital began operations in Tamwe Township in Yangon. The 200-bed facility is a joint venture between Thailand’s Thonburi Healthcare Group and Myanmar’s Gamone Pwint. The development will provide job opportunities for over 250 employees.
- In September 2018 Yoma Siloam Hospitals Pun Hlaing, a joint venture between Yangon-listed First Myanmar Investment and Indonesian conglomerate Lippo Group, acquired a 70% stake in Sein General Hospital in Taunggyi for USD 4 million. The 100-bed facility will be rebranded as Pun Hlaing Siloam Hospital and serve as the group’s first hospital in Shan State.
- The pharmaceuticals industry has also seen increased interest from the private sector. In June 2018, Thailand-based pharmaceutical company Mega Lifesciences, a company that has been active in Myanmar for over 20 years, opened a new distribution centre in Yangon, through its distribution arm Maxxcare. The MMK 18.8 billion (USD 13.3 million) facility stretches over 44,500 square metres with 11,140 square metres of air-conditioned warehousing space. Maxxcare also recently obtained a licence to set up a new manufacturing facility in the Thilawa Special Economic Zone, where it intends to manufacture medicines for the local market from 2021.

The future of healthcare in Yangon
The revitalisation of Yangon’s health care delivery systems has recently begun after years of underinvestment that resulted in both Yangon and Myanmar falling behind in many key health-related indicators when compared with the rest of ASEAN.

Challenges to overcome include inadequate and outdated physical and institutional infrastructure, insufficient resources available to frontline health care providers, limited experience implementing complex, decentralised health policy reform and nascent opportunities for private sector health providers to expand. However, with the right mix of sequenced and appropriately financed investments, Yangon Region has a unique opportunity to recover lost ground and become the leader of healthcare in Myanmar. This offers a new opportunity for investment into hospital infrastructure, equipment and broader healthcare services.

To do so, YRG will focus on improving both the quality of and access to a broad range of essential health services, tailored to the needs of individuals and groups at all levels, including those most vulnerable.

Conclusion
YRG aims to offer suitable healthcare infrastructure and services to its population. Current healthcare provision in the Yangon Region lags behind regional peers and rank low from a global perspective. There is a significant need for investment across all of the healthcare sector from core healthcare infrastructure such as hospitals, to equipment, to services and clinical staff. The opportunity for investment is very broad across both public and private healthcare provision.
### Abbreviation

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADB</td>
<td>Asian Development Bank</td>
</tr>
<tr>
<td>ANP</td>
<td>Arakan National Party</td>
</tr>
<tr>
<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
</tr>
<tr>
<td>BOT</td>
<td>Build-Operate-Transfer</td>
</tr>
<tr>
<td>CBD</td>
<td>Central Business District</td>
</tr>
<tr>
<td>CCGT</td>
<td>Combined-Cycle Gas Turbine</td>
</tr>
<tr>
<td>CESR</td>
<td>Comprehensive Education Sector Review</td>
</tr>
<tr>
<td>CHDB</td>
<td>Construction and Housing Development Bank</td>
</tr>
<tr>
<td>CIP</td>
<td>Commercially Important Person</td>
</tr>
<tr>
<td>DCA</td>
<td>Department of Civil Aviation</td>
</tr>
<tr>
<td>DICA</td>
<td>Directorate of Investment and Company Administration</td>
</tr>
<tr>
<td>DoPH</td>
<td>Department of Public Health</td>
</tr>
<tr>
<td>DTVET</td>
<td>Department of TVET</td>
</tr>
<tr>
<td>DUHD</td>
<td>Department of Urban and Housing Development</td>
</tr>
<tr>
<td>EPGE</td>
<td>Electric Power Generation Enterprise</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
</tr>
<tr>
<td>FMC</td>
<td>First Myanmar Construction Co., Ltd</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GW</td>
<td>Gigawatt</td>
</tr>
<tr>
<td>ID</td>
<td>Identity document</td>
</tr>
<tr>
<td>IDA</td>
<td>International Development Association</td>
</tr>
<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
</tr>
<tr>
<td>IPP</td>
<td>Independent Power Plant</td>
</tr>
<tr>
<td>IWT</td>
<td>Inland Water Transport</td>
</tr>
<tr>
<td>JBIC</td>
<td>Japan Bank for International Cooperation</td>
</tr>
<tr>
<td>JICA</td>
<td>Japan International Cooperation Agency</td>
</tr>
<tr>
<td>JPY</td>
<td>Japanese Yen</td>
</tr>
<tr>
<td>KV</td>
<td>Kilovolt</td>
</tr>
<tr>
<td>kWh</td>
<td>Kilowatt hour</td>
</tr>
<tr>
<td>LNG</td>
<td>Liquefied Natural Gas</td>
</tr>
<tr>
<td>MCEA</td>
<td>Myanmar Construction Entrepreneurs Association</td>
</tr>
<tr>
<td>MCL</td>
<td>Myanmar Companies Law</td>
</tr>
<tr>
<td>MEC</td>
<td>Myanmar Economic Corporation</td>
</tr>
<tr>
<td>MGD</td>
<td>Million gallons per day</td>
</tr>
<tr>
<td>MIC</td>
<td>Myanmar Investment Commission</td>
</tr>
<tr>
<td>MIL</td>
<td>Myanmar Investment Law</td>
</tr>
<tr>
<td>MIMU</td>
<td>Myanmar Information Management Unit</td>
</tr>
<tr>
<td>MITT</td>
<td>Myanmar International Terminal Thilawa</td>
</tr>
<tr>
<td>MJTD</td>
<td>Myanmar Japan Thilawa Development</td>
</tr>
<tr>
<td>MMK</td>
<td>Myanmar Kyat</td>
</tr>
<tr>
<td>MoC</td>
<td>Ministry of Construction</td>
</tr>
<tr>
<td>MoE</td>
<td>Ministry of Education</td>
</tr>
<tr>
<td>MoEE</td>
<td>Ministry of Electricity and Energy</td>
</tr>
<tr>
<td>MoH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MoHT</td>
<td>Ministry of Hotels and Tourism</td>
</tr>
<tr>
<td>Mol</td>
<td>Ministry of Industry</td>
</tr>
<tr>
<td>MoTC</td>
<td>Ministry of Transport and Communications</td>
</tr>
<tr>
<td>MPA</td>
<td>Myanmar Port Authority</td>
</tr>
<tr>
<td>MPs</td>
<td>Member of Parliament</td>
</tr>
<tr>
<td>MRT</td>
<td>Mass Rapid Transport</td>
</tr>
<tr>
<td>MSDP</td>
<td>Myanmar Sustainable Development Plan</td>
</tr>
<tr>
<td>MW</td>
<td>Megawatts</td>
</tr>
<tr>
<td>NEP</td>
<td>National Electrification Plan</td>
</tr>
<tr>
<td>NESP</td>
<td>National Education Strategic Plan</td>
</tr>
<tr>
<td>NGOs</td>
<td>Non-governmental organizations</td>
</tr>
<tr>
<td>NLD</td>
<td>National League for Democracy</td>
</tr>
<tr>
<td>NRW</td>
<td>Non-revenue water</td>
</tr>
<tr>
<td>NTMP</td>
<td>National Transport Master Plan</td>
</tr>
<tr>
<td>NWP</td>
<td>National Water Policy</td>
</tr>
<tr>
<td>NWRC</td>
<td>National Water Resources Committee</td>
</tr>
<tr>
<td>NYC</td>
<td>New Yangon City</td>
</tr>
<tr>
<td>NYDC</td>
<td>New Yangon Development Company Limited</td>
</tr>
<tr>
<td>ODA</td>
<td>Official development assistance</td>
</tr>
<tr>
<td>PPP</td>
<td>Public-Private Partnership</td>
</tr>
<tr>
<td>PSCs</td>
<td>Production Sharing Contracts</td>
</tr>
<tr>
<td>RFP</td>
<td>Request For Proposal</td>
</tr>
<tr>
<td>SEZ</td>
<td>Special Economic Zone</td>
</tr>
<tr>
<td>TEUs</td>
<td>Twenty-foot equivalent units</td>
</tr>
<tr>
<td>TMIT</td>
<td>Thilawa Multipurpose International Terminal</td>
</tr>
<tr>
<td>TOD</td>
<td>Transit Oriented Development</td>
</tr>
<tr>
<td>TVET</td>
<td>Technical Vocational Education and Training</td>
</tr>
<tr>
<td>UMRT</td>
<td>Urban Mass Rapid Transit</td>
</tr>
<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
</tr>
<tr>
<td>USD</td>
<td>US Dollar</td>
</tr>
<tr>
<td>USDP</td>
<td>Union Solidarity and Development Party</td>
</tr>
<tr>
<td>VIP</td>
<td>Very Important Person</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
<tr>
<td>WTP</td>
<td>Water Treatment Plant</td>
</tr>
<tr>
<td>YBS</td>
<td>Yangon Bus Service</td>
</tr>
<tr>
<td>YCDC</td>
<td>Yangon City Development Committee</td>
</tr>
<tr>
<td>YESC</td>
<td>Yangon Electricity Supply Corporation</td>
</tr>
<tr>
<td>YIA</td>
<td>Yangon International Airport</td>
</tr>
<tr>
<td>YMD</td>
<td>Yangon Metropolitan Development Public Company Limited</td>
</tr>
<tr>
<td>YOY</td>
<td>Year on year</td>
</tr>
<tr>
<td>YRG</td>
<td>Yangon Region Government</td>
</tr>
<tr>
<td>YRTA</td>
<td>Yangon Region Transport Authority</td>
</tr>
</tbody>
</table>

**Notes**

Abbreviation

- **ADB**: Asian Development Bank
- **ANP**: Arakan National Party
- **ASEAN**: Association of Southeast Asian Nations
- **BOT**: Build-Operate-Transfer
- **CBD**: Central Business District
- **CCGT**: Combined-Cycle Gas Turbine
- **CESR**: Comprehensive Education Sector Review
- **CHDB**: Construction and Housing Development Bank
- **CIP**: Commercially Important Person
- **DCA**: Department of Civil Aviation
- **DICA**: Directorate of Investment and Company Administration
- **DoPH**: Department of Public Health
- **DTVET**: Department of TVET
- **DUHD**: Department of Urban and Housing Development
- **EPGE**: Electric Power Generation Enterprise
- **FDI**: Foreign Direct Investment
- **FMC**: First Myanmar Construction Co., Ltd
- **GDP**: Gross Domestic Product
- **GW**: Gigawatt
- **ID**: Identity document
- **IDA**: International Development Association
- **IFC**: International Finance Corporation
- **IPP**: Independent Power Plant
- **IWT**: Inland Water Transport
- **JBIC**: Japan Bank for International Cooperation
- **JICA**: Japan International Cooperation Agency
- **JPY**: Japanese Yen
- **KV**: Kilovolt
- **kWh**: Kilowatt hour
- **LNG**: Liquefied Natural Gas
- **MCEA**: Myanmar Construction Entrepreneurs Association
- **MCL**: Myanmar Companies Law
- **MEC**: Myanmar Economic Corporation
- **MGD**: Million gallons per day
- **MIC**: Myanmar Investment Commission
- **MIL**: Myanmar Investment Law
- **MIMU**: Myanmar Information Management Unit
- **MITT**: Myanmar International Terminal Thilawa
- **MJTD**: Myanmar Japan Thilawa Development
- **MMK**: Myanmar Kyat
- **MoC**: Ministry of Construction
- **MoE**: Ministry of Education
- **MoEE**: Ministry of Electricity and Energy
- **MoH**: Ministry of Health
- **MoHT**: Ministry of Hotels and Tourism
- **Mol**: Ministry of Industry
- **MoTC**: Ministry of Transport and Communications
- **MDP**: Myanmar Sustainable Development Plan
- **MW**: Megawatts
- **NEP**: National Electrification Plan
- **NESP**: National Education Strategic Plan
- **NGOs**: Non-governmental organizations
- **NLD**: National League for Democracy
- **NRW**: Non-revenue water
- **NTMP**: National Transport Master Plan
- **NWP**: National Water Policy
- **NWRC**: National Water Resources Committee
- **NYC**: New Yangon City
- **NYDC**: New Yangon Development Company Limited
- **ODA**: Official development assistance
- **PPP**: Public-Private Partnership
- **PSCs**: Production Sharing Contracts
- **RFP**: Request For Proposal
- **SEZ**: Special Economic Zone
- **TEUs**: Twenty-foot equivalent units
- **TMIT**: Thilawa Multipurpose International Terminal
- **TOD**: Transit Oriented Development
- **TVET**: Technical Vocational Education and Training
- **UMRT**: Urban Mass Rapid Transit
- **UNESCO**: United Nations Educational, Scientific and Cultural Organization
- **USD**: US Dollar
- **USDP**: Union Solidarity and Development Party
- **VIP**: Very Important Person
- **WHO**: World Health Organisation
- **WTP**: Water Treatment Plant
- **YBS**: Yangon Bus Service
- **YCDC**: Yangon City Development Committee
- **YESC**: Yangon Electricity Supply Corporation
- **YIA**: Yangon International Airport
- **YMD**: Yangon Metropolitan Development Public Company Limited
- **YOY**: Year on year
- **YRG**: Yangon Region Government
- **YRTA**: Yangon Region Transport Authority
Notes

References
1. PwC ‘Doing Business in Myanmar’, 2018
2. BMI
5. PwC ‘Doing Business in Myanmar’, 2018
6. “2018 Revision of World Urbanisation Prospects”, Department of Economic and Social Affairs, United Nations
7. World Bank ‘Ease of Doing Business Index’, 2018
8. Trading Economies, ‘Myanmar Government Debt to GDP’, 2018
9. UNESCO
10. BMI
11. World Bank’s Logistics Performance Index, 2018
12. Myanmar Sustainable Development Plan
13. Myanmar Times
17. The Oxford Report, Myanmar, 2019
19. PwC ‘Doing Business in Myanmar’, 2018
22. BMI
24. Japan International Cooperation Agency
25. Asian Development Bank
26. Myanmar Transport, Oxford Business Group
27. Asialink Business and PwC, ‘Country Starter Pack, Myanmar,
28. Ministry of Electricity and Energy
29. Oxford Economics
30. UNESCO
31. Myanmar Sustainable Development Plan
32. World Health Organisation
PwC service offerings:

1. Mergers and acquisitions advisory
2. Capital projects and infrastructure advisory
3. Market entry strategy and advisory
4. Initial public offer and other capital market services
5. Corporate governance and risk advisory services
6. Taxation, customs and excise duties advisory services
7. Assurance services
8. Business and technology consulting services
9. Human resources advisory and international assignment services
10. Incorporation and corporate secretarial services
11. Anti-corruption and corporate restructuring services
Contact us

PwC Myanmar is located at:
PricewaterhouseCoopers Myanmar Co., Ltd
Unit 02, 04, 06, 08, 10, Level 11, Myanmar Centre Tower 1,
No. 192, Kabar Aye Pagoda Road, Bahan Township, Yangon, Myanmar

Ong Chao Choon
Managing Partner
+65 6236 3018
chao.choon.ong@sg.pwc.com

Jessica Ei Ei San
Government and Client Relations
+95 9 4402 30342
jessica.ee.san@mm.pwc.com

Janeshwar Pachigolla
Mergers and Acquisitions
+95 9 2540 02564
janeshwar.pachigolla@mm.pwc.com

Maheshwar Venkataraman
Strategy and Operations
+65 9830 5063
mahesh.v@sg.pwc.com

Alywin Teh
Risk Assurance
+65 6236 7268
alywin.teh@sg.pwc.com

Paul Cornelius
Tax
+65 6236 3718
paul.cornelius@sg.pwc.com

Mark Rathbone
Infrastructure
+65 6236 4190
mark.rathbone@sg.pwc.com

(Note: We will relocate in the third quarter of 2019. Please check our website for our new address)