

A STUDY INTO THE
PROPOSED NEW
TELECOMMUNICATIONS
OPERATOR IN THE
PHILIPPINES:
CRITICAL SUCCESS FACTORS AND LIKELY RISKS



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1. INTRODUCTION

The following report provides an in-depth analysis of the proposed entry of a third telecommunications operator in the Philippines. The report specifically looks at the critical success factors and likely risks involved.

The report has been undertaken by specialist Asia Pacific consulting firm Creator Tech on behalf of private sector parties interested in the development of the telecommunications industry in the Philippines market.

Creator Tech provides bespoke research and advisory services to public and private sector organisations on topics such as digital technologies, wireless networks, Internet of Things, Smart City planning and build-outs, telecommunications, broadband, data sharing and open data. The firm has been operating for over 15 years in Australia and across the region.



2. EXECUTIVE SUMMARY

Building a telecommunications network in the Philippines is extremely challenging. The country, for example, is an archipelago of over 7,000 islands.

Since the introduction of Globe Communications as a challenger to the previous private monopoly of PLDT, much progress has been made, despite both the natural challenges and other 'man-made' challenges detailed below.

Both of the incumbent telcos, however, are much criticised for coverage, bandwidth, service and pricing - and also (surprisingly) for being profitable. The tendency to bash the telcos when looking for scapegoats tends to be a distortion of the real picture.

Based on this criticism, however, the Philippines Government called for a third national telco in late 2017 - and in doing so sought the help of China. As a result, Dito Telecommunity was appointed in July 2019 as the third operator.

Dito, formerly known as Mindanao Islamic Telephone Company Inc (or Mislattel), is a consortium composed of Davao businessman Dennis Uy's Udenna Corporation, its subsidiary Chelsea Logistics Corporation and Chinese State-owned China Telecommunications Corporation, a parent company of China Telecom.

SOME OTHER KEY FACTS TO BE CONSIDERED:

- The 40% non-Philippine partner in this third national telco, China Telecom, reports to the Central People's Government in China.
- This partner was put forward after a request from President Duterte to Li Keqiang, Premier of the State Council of the People's Republic of China, for a third mobile operator to be "led by a Chinese company".
- The selection process which then resulted in the China Telecom consortium being appointed appears to have been flawed.
- The license terms do not incentivise an operator to offer telephony to 'unserved and underserved' areas. Rather, the incentive is to increase coverage in heavily populated areas.
- China Telecom describes itself as "a main force for building a cyber power" – raising serious questions on cyber security, citizens' privacy and national interests (topics not covered in this study).

While researching and reporting on telecommunications in the Philippines, it has been impossible to avoid political considerations. Yet the current challenges for the telephony system, as will be seen from this report, are largely rooted in complex regulation, questionable oversight and endemic corruption.

To meet its spending commitments the third telco will need a further US\$2.5bn in its credit facility. Its sole lender is Bank of China, but it is unlikely the bank will extend the total amount based on purely commercial grounds. Therefore, the funding of this venture may well be at risk. Alternatively, it could be assumed this funding is being extended for non-commercial reasons.



3. CHALLENGES OF BUILDING A NETWORK

The challenges of building a telecommunications network in the Philippines are broad and comprise both natural and human-generated obstacles.

SOME OF THE NATURAL OBSTACLES INCLUDE:

MOUNTAIN AREAS

Many sparsely inhabited areas are inaccessible, or hard to access for infrastructure build. The Cordilleras and the Caraballos form an extensive mountain system in Northern Luzon. The Sierra Madre range stretches from Quezon province in the south to Cagayan in the north. Approximately 80% of this range is tropical rainforest.

VOLCANOES

Several volcanoes in the country are active. Mount Pinatubo is notorious for its destructive eruption in June 1991 and Taal Volcano erupted on January 12, 2020.

EARTHQUAKES

Additionally, a 6.6 magnitude earthquake affected areas in Masbate, the Philippines 11th largest island, just recently (August 2020).

JUNGLE AND RAINFOREST

The Sierra Madre Mountains are home to the largest track of virgin jungle in the Philippines; there is more tropical rainforest in the islands of Mindanao and Palawan. Eastern Mindanao contains the Philippines' highest peak, Mt. Apo, and most of its jungle is mountainous. Palawan, the Philippines' largest province, has retained approximately 50% of its original jungle.

TYPHOONS

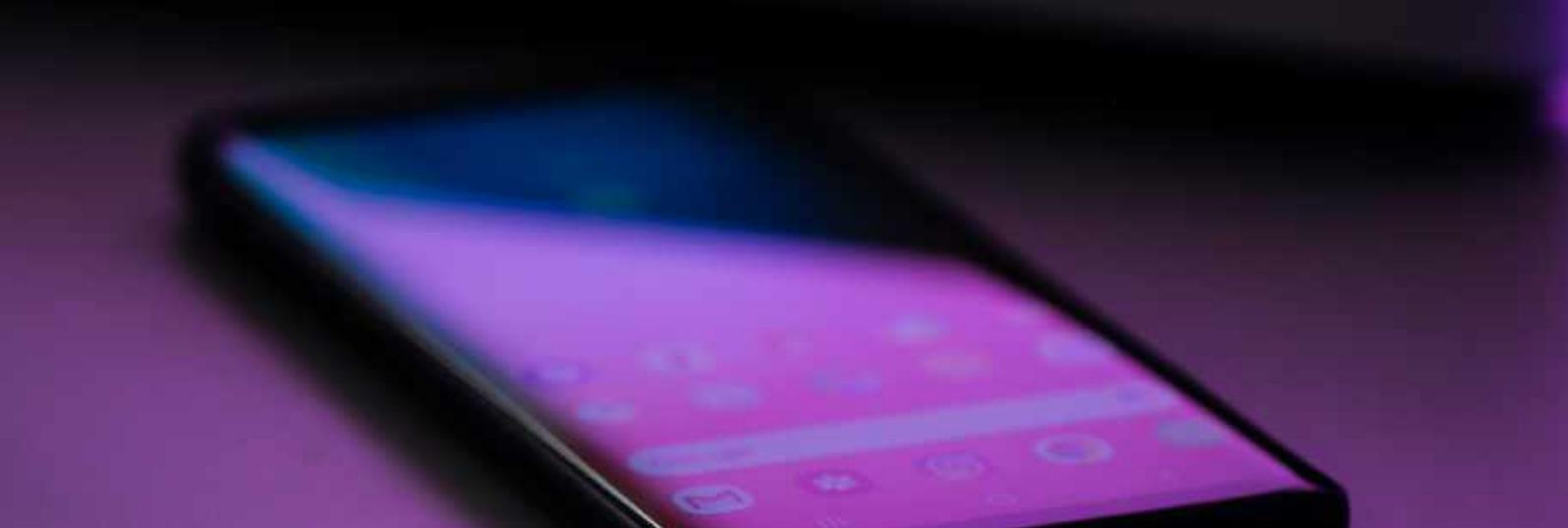
In 2019 Typhoon Kammuri displaced half a million people, closed down government work, shut schools and battered most of Luzon island. Over 500 flights were cancelled. This was the 20th storm to hit the Philippines in the first 6 months of that year. In 2013, Super Typhoon Haiyan killed more than 6,300 people.

ISLAND STRUCTURE

The country is an archipelago of over 7,000 islands. To cover the entire populated area the telco network must in many cases include deep sub-sea connections. These are challenging, expensive and may have ecological repercussions if not managed correctly.

In summary, building a telecommunications network in the Philippines to cover the entire population is already extremely challenging, due to geographical, geological, ecological and weather conditions that are not faced in most other countries.

This is further complicated by human-generated factors.



3. CHALLENGES OF BUILDING A NETWORK *(cont)*

SOME OF THE HUMAN - GENERATED OBSTACLES INCLUDE:

REGULATORY

Regulatory factors pose complex and opaque official and unofficial obstacles. Between 25-30 permits from national and local government depts have been required to build a single cell tower for a base station transceiver.

Business World reported in August 2020 that the “level of government interference allows leading telcos to build only 3,000 towers per year. But the current tower backlog stands at 30,000, such that it will take at least 10 years for the country to keep with the current tower demand”.

While conducting this study, this situation may have improved. For instance, the Senate Minority Leader put a proposed provision in August 2020 to suspend for 3 years many of the permits required for telcos to build cell towers. More details can be found in Appendix 3: Proposal to streamline cell towers permit process.

POLITICAL

Although this study sought to avoid political considerations, this proved impossible.

The underlying justification for establishing a third national telco is based on pulling the Philippines economy into the 21st Century. Effectively functioning telecommunications, broadband and Internet access are essential to improving the productivity of citizens, companies and institutions such as hospitals today, just as interstate highways were essential in the 1950s.

In the Philippines, as in some other large countries where the population is dispersed, geo-social considerations also play a large factor in government policies. For example, a decent broadband service would be a significant factor in improving conditions in regional areas.

The current President has taken aim at the current incumbent telcos. Along with drug-dealers, water monopolies, sections of the press and oligarchs, telcos have become a target for the Presidential Palace.

“The President vs the Telcos” is not new in the Philippines. In 1993, “the country’s then president Fidel Ramos found it impossible to break PLDT’s monopoly. In fact, the Supreme Court ruled in favour of the telephone company’s franchise”.

Source: <https://www.chicagotribune.com/news/ct-xpm-1993-02-14-9303181972-story.html>

The Chicago Tribune went on to report: “The problem with the phone service is not just the long line for service - 600,000 are waiting for installation, according to the Department of Transport and Communications - but the monopoly of the Philippine Long-Distance Telephone Co., a family enterprise with a 70-year-old nationwide franchise”.

President Corazon Aquino made the first steps toward competition in the industry. New licenses were issued for operations of international gateways, cellular mobile services and cable television.

In 1995, the Public Telecommunications Policy Act declared that a “healthy and competitive environment shall be fostered, in which telecommunications carriers are free to make business decisions and to interact with one another in providing telecommunications services, with the end view of encouraging their financial viability while maintaining affordable rates”. **Source:** [Philippine Telecommunications Infrastructure Industry https://boi.gov.ph/wp-content/uploads/2018/02/Telecommunications-Infrastructure-January-2018.pdf](https://boi.gov.ph/wp-content/uploads/2018/02/Telecommunications-Infrastructure-January-2018.pdf)

3. CHALLENGES OF BUILDING A NETWORK (cont)

In summary, it is impossible to avoid political considerations when discussing the telecommunications sector in the Philippines. Yet the current state of the telephony system is as much due to complex regulation, questionable oversight and endemic corruption as it is to the incumbent telcos.

MEDIA

The media, both national and international, frequently ignore the achievements of the incumbent carriers and question their motives. Specialist technical communications journal "Light Reading" echoed the view of some Western and local Philippine observers with the unsubstantiated claim that "the country still has one of the most expensive internet rates in the world" (it in fact ranked 25th in an index of 102 countries with US, Australia and Canada all ranking dearer).

Source: *Macrotrends*

The tendency to bash the telcos when looking for scapegoats may be emotionally satisfying but tends to be a simplification – or even a distortion – of the real picture.

CORRUPTION

As noted by Australian journalist and industry commentator David Ramli the "elephant in the room" is corruption.

After the failure of a Telstra-San Miguel partnership to form a third national Telco in 2016 Ramli wrote:

"PLDT had already begun lobbying the nation's President to forcibly redistribute the electronic resource and both incumbents were preparing for a price war".

"And finally there's the elephant in the room – the widespread corruption in the Philippines... corruption remains a constant problem that has reached the highest levels of government".

"One of the biggest scandals involved the construction of a national broadband network in 2008 and accusations of interference by the husband of the country's then-president Gloria Arroyo".

"About 15,000 protesters took to the streets in Makati City – not far from Telstra's Manila headquarters".

In addition to the multiple permits mentioned above, local bribes are often required to get a new base station across the line. Although the Government has made moves to streamline the process, it remains to be seen whether this will alleviate the delays and under-the-table payments, both of which add to the cost and the timescale when rolling out new infrastructure.

In summary, human-generated obstacles to building a telco network, which add to the challenges posed by nature, include:

- Complex and opaque official and unofficial regulatory processes.
- The tendency to use the Telcos as a political football – which is an over simplification.
- Media indulgence in telco-bashing, which further amplifies this simplification.



Photo: Reuters

4. A THIRD NATIONAL OPERATOR

The selection of a third telecommunications operator started in 2017 when President Duterte met China's Prime Minister Li Keqiang in Manila. Duterte said that the country should have a third mobile operator and that it should be led by a Chinese company.

China Telecom was chosen by the Chinese Government as an investor in the Philippines for providing telecom services. **Sources:** Rappler 10 December 2017; Reuters 11 December 2017

Communications Secretary Martin Andanar announced in December 2017 that "the Chinese Government has selected China Telecom to invest in the Philippines in a bid to break the current duopoly in the local telecommunications industry".

Andanar said China Telecom would now need to look for a partner in the Philippines, in keeping up with rules on foreign ownership limitations in the Philippines (under the 1987 Philippine Constitution, only companies with at least 60% Philippine ownership can operate as a public utility).

Two processes then went into effect: the process of selecting a Philippine partner for China Telecom; and that of allocating a license and spectrum to the new party.

5. BACKGROUND ON CHINA TELECOMMUNICATIONS

China Telecom is a fully-controlled entity of the Government of the People's Republic of China. Its immediate reporting line is to China's Ministry of Industry and Information Technology, which comes under the State Council of the PRC.

The State Council, or Central People's Government in China, forms one of three interlocking branches of power, the others being the Communist Party of China and the People's Liberation Army.

China Telecom is the largest fixed-line service and the third largest mobile telecommunications provider in China.

According to the United States Department of Defense (US DoD), the company has links to the People's Liberation Army.

Source: <https://www.axios.com/defense-department-chinese-military-linked-companies-856b9315-48d2-4aec-b932-97b8f29a4d40.html>

In June 2020, the Defense Department made public for the first time a list of Chinese companies that are tied to the Chinese military. China Telecom is one of the 20 companies named on this list. See Appendix 1 for the full list published by US DoD.

China Telecom describes itself on its website as "a main force for building a cyber power". **Source:** <https://www.chinatelecomglobal.com/about/company/>

IN SUMMARY:

- The 40% non-Philippine partner in Dito Telecommunity reports to the Central People's Government in China.
- This partner was put forward after a request from President Duterte to Li Keqiang for a third mobile operator to be "led by a Chinese company".
- This lead partner, China Telecom, describes itself as "a main force for building a cyber power".

This raises serious questions on cyber security, citizens' privacy and national interests. These have serious repercussions on multiple fronts. (Note: these topics are not covered in this study).



6. BACKGROUND ON UDENNA CORPORATION

Udenna Corporation was founded in 2002 by Dennis Ang Uy, a Chinese-Filipino native of Davao City. His family's business was involved in mining, supermarkets and a car dealership.

Udenna Corporation became a holdings company to manage Uy's business interests. In 2005 Udenna subsidiary Phoenix Petroleum effected a minor disruption of the oil industry in the country, achieving a 6.9% market share behind Petron Corp., Pilipinas Shell and Chevron. Source: Business Mirror

Uy is described as a "long-time friend of President Rodrigo Duterte" (eg. Manila Bulletin). Uy and immediate family members donated PHP 36m (US\$750,000) to Duterte's Presidential campaign. And the scope of his business interests increased exponentially following Duterte's assumption of the presidency in 2016.

Philstar reported that "the present has seen Uy on an aggressive expansion mode. Observers in the business circle say this is not surprising given his close ties to Malacañang. His close friend and fellow Davaoeño, Rodrigo Duterte, is President of the Republic".

These new business interests included property development and the "lucrative gambling business". The Philippine Amusement and Gaming Corp., the gaming regulator, granted Udenna a license to develop a \$300-million, 12-hectare integrated resort and casino in Cebu. In 2017 Udenna Group announced that its subsidiary Chelsea had completed the US\$1 billion acquisition of Clark Global City "with Bank of China, BDO Unibank and Philippine National Bank as its financial partners".

The Manila Bulletin announced: "Duterte pal takes full control of \$1b Clark Global City. Dennis Uy, a long-time friend of President Rodrigo Duterte, finally won full control over the entire 177-hectare prime property development within the Clark Freeport Zone".

Not all of these ventures are financially successful. PH Resorts Group Holdings, the gaming and hospitality arm of Udenna Corporation, delayed completion of its Cebu resort until 2022. Details included in the Group's First Quarter 2020 financial results saw the company record a loss of US\$2.8m, an increase from the previous loss of US\$1.2 million; and a 55% decline in operating revenue to US\$189,500.

The Philippine partners BDO Unibank and Philippine National Bank have not backed Uy/Udenna in their current venture into telecommunications.

Neither Udenna nor its subsidiary Chelsea Logistics had experience in the telco-specific expertise necessary to determine investment levels, coverage, type of technology and other inputs to the bid. These areas of expertise would have been supplied by China Telecom.

This in turn means that critical decisions about engineering the network, about security and about infrastructure were effectively made by China Telecom.



7. SELECTION PROCESS

In July 2018, subsequent to his meeting with Chinese prime minister Li Keqiang, President Duterte directed the Department of Information and Communications Technology (DICT) and the National Telecommunications Commission (NTC) to name the third telecommunications provider before the end of that year.

A bidding process was devised and overseen by DICT and the NTC. Three selection criteria for the winning bid were announced: national population coverage, minimum average broadband speed and capital and operational expenditures.

The winning bidder would be awarded a Certificate of Public Convenience and Necessity with validity of either 15 years or the length of the winning bidder's existing franchise, whichever is shorter; and radio frequency bandwidths – 700 megahertz (MHz), 2100 MHz, 2000 MHz, 2.5 gigahertz (GHz), 3.3 GHz and 3.5 GHz.

Bidders were required to put up a PHP700 million participation security (this was raised from PHP 500m to PHP700 million shortly before the bid deadline) and a PHP10 million non-refundable appeal fee.

Total minimum cost of bidding was PHP710m or US\$14.6 million.

Ten parties bought necessary documents in order to participate in the bidding source: <https://news.abs-cbn.com/business/11/03/18/bidding-for-third-telco-player-to-begin-next-week-ntc> These included Norway's Telenor, local companies Amatelco, NOW Corp and Converge ICT – which planned to team with Korea Telecom. All local companies, bar Udenna Corp, had experience in telecommunications, as did Telenor and Korea Telecom.

Before the bidding, a number of questions were asked, and aspersions cast on the process. Converge withdrew before the deadline citing the absence of a level playing field. It also questioned the involvement of a Chinese state-owned company. NOW Corp found the monetary requirements of the bid to be a "money making scheme". PT&T questioned the discriminatory national scale requirement which allowed foreign bidders with regional operations to participate while placing extra operational requirements on local firms.



7. SELECTION PROCESS (cont)

THREE CONSORTIA FORMALLY SUBMITTED BIDS:

- China Telecom in partnership with Udenna Corporation;
- Sear Telecom - a consortium of LCS Holdings and TierOne Communications backed by Fujian Torch Electron Technology, Singaporean Miller Pte. Ltd., and Southeast Asia Telecom.
- Philippine Telegraph and Telephone Corporation, a broadband provider in Luzon which provides services through fibre cable. It is also the internet service provider of the Armed Forces of the Philippines.

Following the awarding of the license, charges were made that the China Telecom-Udenna joint venture had submitted “sham” documents and had not made full disclosure as to its shareholders. The bid oversight committee was also accused by a Senator of double standards. Senator Grace Poe pointed out that the House legislative franchises committee let Mislattel consortium (now Dito Telecommunity) operate after it failed to go on air within a year after securing its franchise in 1998. **Source:** <https://newsinfo.inquirer.net/1306442/poe-slams-double-standard-on-abs-cbn-mislattel#ixzz6U6XMk4XQ>

As stated by the respected Fitch Solutions: “The selection of China Telecom, which follows the almost immediate disqualification of the two other bidders, hints at the Government’s bias towards Chinese involvement in the telecoms sector”. Fitch also called into question the independence of the NTC.

IN SUMMARY:

- President Duterte said that the Philippines should have a third mobile operator and that it should be led by a Chinese company.
- China Telecom was put forward by the Chinese Government.
- President Duterte directed the DICT and the NTC to name the third telecommunications provider.
- A bidding process was devised.
- China Telecom selected Udenna, a consortium with no telco experience, as local partner.
- The founder of Udenna is a personal friend of President Duterte.
- Ten companies expressed interest and bought bidding documents, however only 3 of these went forward to put in a formal bid.
- Of these, 2 were immediately eliminated and the licence was awarded to the China Telecom consortium.
- The bid process was criticised for the absence of a level playing field.

It could be concluded at best that the selection process appears to have been flawed.



8. TERMS AND CONDITIONS OF LICENCE

The commitments submitted by China Telecom-Udenna, which became binding terms on award of the licence, include:

- 37% population coverage by the end of the first year of operation.
- Bandwidth (speed) of 27 megabits per second in first year of operation.
- Post PHP25.7 billion (US\$530m) performance bond.
- Spend PHP150 billion 1st year.
- Spend PHP257 billion (US\$5.3bn) over 5 years.

9. RESOURCES NEEDED

The resources needed which are critical to the success or otherwise of the new telco, include the following:

- Spectrum.
- Base stations, towers and sites.
- Equipment.
- Human capital.

SPECTRUM

The availability of spectrum/frequencies is fundamental to mobile telecommunications. The awarding of the third national telco license included the allocation of spectrum. The following are listed as the frequencies awarded to Dito Telecommunity:

FREQUENCY	PROTOCOL	CLASS
700 MHz	LTE	4G
2000 MHz	LTE	4G
2100 MHz	LTE	4G
2500 MHz	LTE	4G
3300 MHz	LTE	4G
3500 MHz	NR	5G

The higher the frequency, the shorter the signal distance. 5G tends to use higher frequencies than 4G. As a result, a 5G network needs a greater number of base stations to cover the same area as a 4G network. This also affects the cost of building the network.

The spectrum allocation is enough for an operator to provide ubiquitous 4G coverage. **Source:** [GMA News Online https://www.gmanetwork.com/news/money/companies/698634/3rd-telco-to-get-permit-to-operate-by-july-8-dict/story/](https://www.gmanetwork.com/news/money/companies/698634/3rd-telco-to-get-permit-to-operate-by-july-8-dict/story/)

As described by Huawei: “The mid frequency bands in the 2 to 8 GHz range, namely TDD bands at 3300-3800, 2600 and 2300 MHz, are emerging as the primary frequency bands for the introduction of 5G”. **Source:** https://www-file.huawei.com/-/media/corporate/pdf/public-policy/public_policy_position_5g_spectrum_2020_v2.pdf?la=en.

Handsets which are available in some countries such as the Vivo iQOO U1 will already work on this 3500MHz frequency.

Dito committed to 37% population coverage in the first year. The easiest way to achieve this would be to focus on high population densities such as the National Capital Region of Metro Manila, Cebu and Davao City. Comments in the press indicate that this is their plan. This would still leave the ‘unserved and underserved’ regions of the country no better off, but would ensure the operator does not risk heavy fines for not meeting its commitments.

Dito appears to already have the resources in terms of radio spectrum/frequencies to launch a 4G service once the network is built.

The license terms, relating to achieving maximum population coverage, do not incentivise an operator to offer telephony to ‘unserved and underserved’ areas. Rather, the incentive is to increase coverage in heavily-populated areas.

9. RESOURCES NEEDED (cont)

BASE STATIONS, TOWERS AND SITES

Acquiring the necessary sites for base stations, transceivers, Node B's (in 4G) and /or radio units (5G) is a complex and sometimes murky process in the Philippines, with human-imposed obstacles added to the natural challenges. Even among Asian countries the Philippines tends to be particularly complex and opaque in this regard.

At least 25 permits from national and local government departments, according to Business World, and as many as 30 permits, are required to build a single cell tower for a base station transceiver. Globe Telecom President Ernest Cu told President Rodrigo Duterte that it takes 28 to 30 permits and over 8 months to build just one tower.

If Dito is to acquire its own sites, as it has already started doing, and building – or subcontracting the build – of its own towers, it will incur the same obstacles, same costs and same delays as the incumbents have incurred.

The Business World article estimates that “it will take at least 10 years for the country to keep up with the current tower demand”. Unless other factors change, Dito will take the same length of time to achieve full coverage. As it has committed to 84% coverage in 5 years, this could be an area of failure for the new venture.

On 11 August 2020, Interior Secretary Eduardo Año reported that 1,502 applications in total to build cellular sites across the country had been given the green light. Four telcos applied for permits to build cell towers in 55 provinces and 25 cities. The Interior Secretary said the approved applications were made under simplified procedures made possible by a joint memo by government agencies on 22 July 2020.

The old application process took 241 days, 19 permits and 86 documentary requirements before approval. The process is now streamlined to 16 days, eight permits and 35 documents for submission. **Source:** CNN Philippines, 11 August 2020.

TECHNOLOGY EQUIPMENT

The necessary physical equipment, hardware and software to build a country-wide 4G network is currently available from worldwide vendors, including Ericsson of Sweden, Nokia of Norway and Huawei of China. In the case of Huawei, this includes equipment for fibre-optic switching and transmission for land-based backhaul or subsea interconnectivity between islands. Indeed Huawei has already done this for the incumbent telcos.

Another essential asset the business increasingly needs in order to function is human capital, both during the build phase, and ongoing, for operations.

HUMAN CAPITAL FOR THE BUILD PHASE

The build phase will be ongoing through the life of the company, but much heavy lifting will need to be done before operations commence. The build is being carried out by subcontractors, so this will have little impact on Dito's own need for human resources.

In 2019 Dito announced infrastructure build agreements with Leo Technologies, Alt-Global-Solutions, Sky Cable, LCS Holdings (who competed with Dito for the carrier licence), China Energy Equipment Co. Ltd and ZEAL Power Construction and Development Corp for the provision of towers, in-building solutions and rooftop construction services. **Source:** Manila Standard <https://manilastandard.net/mobile/article/310894>

9. RESOURCES NEEDED (cont)

Once site construction is complete, the necessary telco equipment will need to be installed, powered, connected and tested. This will require oversight from Dito, however, again, it is not anticipated that hiring or contracting resources to oversee this phase will be a problem.

Since the bid for the licence was formulated at a time when the Philippine partner had few or no telco resources, this will have been done by China Telecom. To put the bid together they will have sketched out where base station sites (towers) should be located as well as how the entire network would be interconnected. The physical construction will therefore need to follow this China Telecom blueprint.

HUMAN CAPITAL FOR THE OPERATIONAL PHASE

This is where the majority of ongoing hiring will take place. The likelihood is that Dito will seek to recruit much of this human capital from its national competitors Globe and Smart. This has already started with the recent announcement of Eric Alberto as President of Dito CME Holdings Corporation.

Alberto, once regarded as the successor to Manny Pangilinan, was Chief Revenue Officer of the PLDT until June 2019. He is highly regarded in the industry.

For most operational job functions there may be little choice but to raid the incumbent telcos for resources (which will further increase tensions between the companies). These experienced resources may be supplemented by others out of technical college.

For instance, a presentation by accountants Sison Corillo Parone & Co implied that an average of 15,000 engineering and technology graduates and 15,500 IT-related graduates were added to the labour pool every year. **Source:** https://www.scp-ph.com/download/IGAF_PHILS_PRESENTATION.pdf.

Where the build phase has resulted in Chinese infrastructure and/or equipment, there is a risk that manuals or online help will be in Chinese and so unreadable by Filipino and English-speaking engineers.

It is unlikely that Dito will hire staff from China Telecom. There are legal restrictions on hiring overseas staff in the Philippines. Likewise, for the same reason, it is unlikely that Dito will hire many staff from other countries overseas.

In both cases, there may be temporary contracting of some specialised skillsets which may be unavailable, or hard to recruit, within country.

NON-FINANCIAL RESOURCES AND RISKS

1. A critical success factor is availability of the relevant spectrum for the network. Dito appears to already have the resources in terms of radio spectrum/frequencies to launch a 4G service once the network is built.
2. Another is the availability of sites for base stations. Acquiring access to these has been a lengthy and complex process. The Government has recently moved to streamline this process. It remains to be seen how this will play out in practice. It would have to be flagged as a possible key risk.
3. Telco equipment for 4G is available from worldwide vendors. This is not an area of risk. 5G is a work in process: much equipment and software is not yet available. However, this situation is the same for all telcos.
4. Human resources for the network build are being sub-contracted. This does not appear to be an area of abnormal risk.
5. Human resources for the operation are largely available in the Philippines. Dito may recruit much of this from national competitors Globe and Smart.

9. RESOURCES NEEDED (cont)

HAND-OVER

A further area of risk may be described as the 'hand-over'. As described above, much if not all of the network design, tower siting and planning will have been done by China Telecom. It will have been based on experience in Mainland China. While handing over to a local operation, this design and these plans:

- a) May need heavy modification to account for the inter-island connections, which will mostly use undersea fibre. Mainland China does not have these geographical challenges;
- b) May be documented in Chinese. If so, it will not be understood by most Philippine operatives, whose main languages are English and Filipino, the national language (a standardized version of Tagalog).

However, since contractors working with Huawei have already pulled undersea cable for the two incumbents, this risk should be overcome. Also with translation, the language issue should not be a great risk – possibly more of a delaying factor.

FINANCIAL RESOURCES

Are Dito's capital commitments sufficient to build the network? Dito's commitments, in order to win the third Telco licence, included a minimum capital expenditure per year of:

Year 1	PHP	150bn (US\$3.07bn)
Year 2	PHP	27bn
Year 1	PHP	27bn
Year 1	PHP	27bn
Year 1	PHP	27bn
Total over 5 years		258bn (US\$5.28bn)

*Currency conversion as of August 2020

IS THIS SUFFICIENT BUDGET? (A) COMPARISONS WITH TELSTRA PROPOSAL

The Year 1 committed spend of over US\$3bn is above the estimate published by Telstra for its proposed (but withdrawn) joint venture with San Miguel Corp in 2016.

Telstra had publicly committed to US\$1bn for a 40% stake in the proposed joint venture, taking the forecast build costs to US\$2.5bn. Analysts have been quoted as estimating a higher build cost of US\$3.5bn, although this included the purchase of spectrum at commercial rates.

The spectrum can be regarded as having been 'paid for' out of the non-refundable fees lodged by potential bidders. Therefore the total forecast cost would be less than the above-quoted US\$3.5bn. In addition, the cost of 4G equipment has followed the downward curve typical of all ICT equipment: it will be cheaper to purchase now than it was in 2016.

IS THIS SUFFICIENT BUDGET? (B) COMPARISONS WITH INCUMBENTS

Another way of estimating whether the budget is adequate is to use comparisons with the published expenditure of the two incumbents.

Both incumbent telco operators had planned another record year of capex investments in 2020, according to Fitch Ratings. Globe had initially budgeted PHP63 billion (2019: PHP51 billion), while PLDT had a capex plan of PHP83 billion (2019: PHP88 billion) including PHP18.5 billion for broadband installations.

Dito's first year commitment of PHP 150bn would include, if necessary, both the build and fit-out of base stations and investment in undersea fibre-optic cable to link the islands.

9. RESOURCES NEEDED (cont)

Globe Telecom in 2017 published the figure of US\$250m (PHP 12.2bn) as the cost of its submarine cable telecommunications connection between Mindanao and the US.

In addition, the tie-up with LCS Holdings means that DITO can lease capacity on shared telco towers that LCS will build in key areas. If this happens, it will mean that Dito only incurs lower yearly opex costs rather than taking the cost of building these 'towers' out of its capex commitments.

It has also struck a deal with Sky Cable to utilise unused fibre-optic cables within Metro Manila. This would further reduce its capex spend.

UNDERSPEND?

CTO Rodolfo Santiago is reported to have said the company may actually spend less than the committed amount: "The way we're doing things now, we may be saving some, rather than spending more, because the detailed design shows that we will be spending less to complete. I'm confident that the way things are going, we might be underspending". **Source:** [Rappler https://rappler.com/business/dito-telecom-tells-critics-we-have-money](https://rappler.com/business/dito-telecom-tells-critics-we-have-money)

In summary, the stated budget should be adequate to build an operational 4G network which is able to reach 37% of the population in its first year of operation.

There may be a risk that if the telco spends less than what has been committed when securing the licence, the company could be penalised.

CAN DITO RAISE THE NECESSARY CAPITAL?

The company is funded through a mix of equity and debt.

1. EQUITY FUNDING

To achieve a listing on the Philippine Stock Exchange, the joint venture acquired shell company ISM, which

was already listed and received approval to change the name to Dito-CME: "DITO CME Holdings Corp, formerly ISM Communications Corporation (ISM), was originally a mining company incorporated in March 1925 under the name Itogon-Suyoc Mines, Inc. On March 6, 2020, the Securities and Exchange Commission approved the change in corporate name to the present one".

"DITO currently has no operating business. The Company is doing business as a holding company as it was since 2016". **Source:** SEC Form 17-A (2019)/Disc. Nos.8638-2019/2288-2020

In December 2019 its share capital was increased from P2.8 billion to P40 billion (US\$833m) source: Business Inquirer

There have been a number of reports of shareholders taking fright:

- a. A snapshot from Morningstar UK appears to show that the Edmond de Rothschild - Asean Equity fund had originally bought 2.3 million shares but divested these in September 2019. **Source:** (<https://www.morningstar.co.uk/uk/funds/snapshot/snapshot.aspx?id=F00000Z9VH>)
- b. The Manila Standard claimed in June 2020 that former DICT Undersecretary Eliseo Rio Jr. divested 1.2 million shares in DITO worth PHP44.4 million, leaving him with 2.3 million shares. Rio has denied the report: "The source of your report is a blog that is publishing fake news," Rio said.
- c. In August 2018, Singapore fund Accion purchased 842 million shares for a total of PHP1.22 billion (USD24.7 million). However, Accion had zero shares in Dito CME Holdings based on its ownership report on July 14, 2020.

9. RESOURCES NEEDED (cont)

MARKET TREMORS AFTER DITO SHAREHOLDERS 'WITHDRAW FUNDS' FROM THIRD TELCO

On 16 Jul 2020 the Manila Standard reported that over the course of the past few weeks two shareholders in DITO have 'withdrawn funds'. It is understood that the entire 30% stake of the Singapore-based fund of businessman Dennis Uy's Dito CME Holdings was sold on Tuesday (14 July): according to Bilyonaryo.com.ph, citing public ownership records, 'Singapore fund Accion divests from Uy's Dito stock... Accion had zero shares in Dito CME Holdings on July 14, 2020'.

In August 2018, Accion had purchased 842 million shares for a total of PHP1.22 billion (USD24.7 million), at a time when the would-be NMP's stock was soaring as it looked like being selected by the DICT and the NTC as the country's 3rd telecoms player.

Source: <https://www.commsupdate.com/articles/2020/07/16/market-tremors-after-two-dito-shareholders-withdraw-funds-from-third-telco/>

In the short time that it has been trading as Dito the stock has risen from PHP 1.6 per share to a peak of PHP 3.6 in July, and then fell back in August. Current stockholder equity stands at US\$85million (PHP 4.2 bn) - about the same value as that of its current assets.

1. DEBT FUNDING

This appears to form the bulk of Dito's accessible capital. Bank of China has offered a credit facility, from which the company has already drawn down US\$500m. "Dito Telecommunity rejected speculations that it does not have the cash to roll out services, as Dennis Uy's other companies grow through debt. "We have already drawn down \$500 million (P25 billion) from Bank of China", Dito Chief Administrative Officer Adel Tamano told reporters in February.

"Dito's commercial operations have been pushed back thrice, which has led to some analysts in the telco industry doubting that the company has the cash to burn".

Source: [Rappler https://rappler.com/business/dito-telecom-tells-critics-we-have-money](https://rappler.com/business/dito-telecom-tells-critics-we-have-money)

It is not clear whether the total credit facility extended by BoC is the US\$5.08bn committed 5-year spend. Terms of the covenant between BoC and Udenna are not known.

On pure commercial grounds, in view of the multiple risks, it seems unlikely that a single lender on its own – even a large bank* - would extend the total amount.

*Bank of China ranked as the fourth-largest company in the world in the Forbes Global 2000 and is one of the largest banks in the world with revenue of over US\$79bn and assets of over US\$3,270bn. For comparison, Australia's largest bank, Commonwealth Bank, has assets of \$700 bn, the largest bank in SE Asia, DBS Group, has US\$403bn and the largest in Indonesia, Bank Central Asia, has US\$56bn in assets. Source: ADV Ratings.

Bank of China reports to the Central Huijin Investment Company, which owns majority stakes in all big four Chinese banks (Bank of China, Industrial and Commercial Bank of China, China Construction Bank and Agricultural Bank of China). Central Huijin Investment Company was established in 2003 and, like China Telecom, is owned by the government of the People's Republic of China.

9. RESOURCES NEEDED (cont)

If the full credit line exceeded the Bank's prescribed risk appetite, then either:

- The funding is at risk; or
- The loan is being extended for other, non-commercial reasons.

If the loan is being made to Dito on grounds other than commercial ones, then given the reporting lines detailed above, it is possible that it could be made on political grounds.

Once again, the underlying issue of geo-politics and the extended overseas influence of the Chinese Government may be at play. Politics apart, there could be a risk that new funds are not extended:

- Factors that could lead to this debt-funded credit facility being withdrawn may include missing target launch/commercialisation dates; and a change in political administration to a Government that is less China-friendly.
- Depending on the terms of the facility, the bank may withhold funds if the company fails to maintain a certain level of capitalisation.

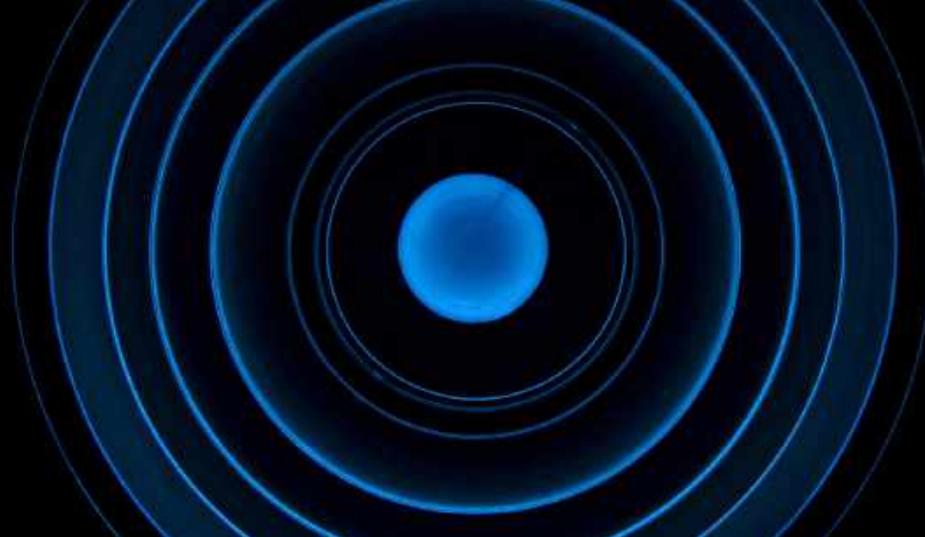
Bank of China has been the only bank willing to finance Dito-CME. "Tamano added that Dito will be funded mostly, if not entirely, by foreign banks, as local ones simply do not have the capacity to fund such a capital-intensive endeavour". Given Uy's proven business and personal relationships with the family controlling BDO Unibank, the Philippines largest bank, this raises questions as to why they were unwilling to help finance this venture.

In summary, it needs to be asked if DITO can raise the capital? To meet its commitments of US\$3bn spending in its first year, DITO will need a further US\$2.5bn in addition to the US\$500m already drawn down from its Bank of China credit facility.

Given the current Balance Sheet, this US\$2.5bn would not come from equity. The only other source is debt. The sole lender is the Bank of China. Commercially, it is unlikely that the Bank of China on its own would extend the total amount.

TWO ALTERNATIVE CONCLUSIONS ARE THAT:

- Funding would appear to be a risk to Dito Telecommunity; or
- This funding is being extended for political reasons.



10. RISK FACTORS

The success factors and their converse, the risk factors, examined in this study may be summarised as follows:

- Building a telecommunications network in the Philippines is extremely challenging, due to natural and geographical conditions. The new telco may not rise to these challenges as well as the two incumbent telcos have done.
- Gaining necessary permits has been a long complex process. Dito would likely not have built enough towers to meet its coverage requirements. The Government has recently streamlined this process, though how well this will work remains to be seen.
- The handover from China Telecom, who planned and designed the network, to Philippine resources may be an area of risk: or one of delay.
- Accumulated delays from the above factors may cause Dito to miss its commitments. This would result in a large fine and the possible surrender of its license.
- Funding the venture through to break-even depends on one sole lender in the Bank of China. BoC may decide that the risks are too great and not extend further credit.
- Other factors that could lead to this credit facility being withdrawn include missing target launch dates; and a change in political administration to a Government that is less China-friendly.
- A future administration may overturn the decision to award the licence. There were several apparent irregularities in the licence process, which could justify withdrawing.

Note: this study has not examined risks based on cyber or security considerations.



11. CONCLUSIONS

The key conclusions to be drawn from the study are as follows:

- It is difficult not to draw the conclusion that China Telecom was 'pre-destined' to win the license for the third telco in the Philippines.
- The fact that they chose a local partner who had no telco experience, but does have close personal links with the President, is troubling.
- It was impossible while undertaking this study not to take into account political considerations both in relation to:
 - Domestic politics within the Philippines; and
 - Geo-political issues and the influence of the Chinese Government.
- The selection process was questionable.
- A future administration would have multiple grounds on which to re-visit or withdraw the license. This represents a risk to the venture.
- Given this risk, as well as multiple 'natural' challenges and risks in building a network, it appears unlikely that a sole lender would back this venture on its own. And yet, Bank of China has done so.
- Sufficient ongoing funding is critical to the success of the third telco. If this is at risk, the entire venture is at risk.

12 APPENDIX

APPENDIX 1:

Qualifying Entities Prepared in Response to Section 1237 of the National Defense Authorization Act for Fiscal Year 1999 (PUBLIC LAW 105-261)

Aviation Industry Corporation of China (AVIC)
China Aerospace Science and Technology Corporation (CASC)
China Aerospace Science and Industry Corporation (CASIC)
China Electronics Technology Group Corporation (CETC)
China South Industries Group Corporation (CSGC)
China Shipbuilding Industry Corporation (CSIC)
China State Shipbuilding Corporation (CSSC)
China North Industries Group Corporation (Norinco Group)
Hangzhou Hikvision Digital Technology Co., Ltd. (Hikvision)
Huawei
Inspur Group
Acro Engine Corporation of China
China Railway Construction Corporation (CRCC)
CRRC Corp.
Panda Electronics Group
Dawning Information Industry Co (Sugon)
China Mobile Communications Group
China General Nuclear Power Corp.
China National Nuclear Corp.
China Telecommunications Corp.

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12 APPENDIX (cont)

APPENDIX 2: COMPANY STRATEGY

The new company's strategy will have to gain the understanding and support of the Board of Directors. In addition, since China Telecom accounts for 40% of the ownership, they will have an input to the company's strategy. Given China Telecom's ownership by the Chinese Government, they may have considerations other than business profitability.

Technological considerations will play a role in formulating strategy – for example:

- Whether to architect the network for 5G from the outset, or leave this until later;
- Whether and where to offer fixed-line broadband;
- Whether and when to target Enterprise users as well as consumers (PLDT reported 26% of its PHP150bn revenue from Enterprise);
- How/whether to target underserved and unserved regions.

These strategy factors impact on costs, revenue models, target markets and skillsets.

Determining the mix of these social, economic and financial factors will be essential to the success of the business.

History is littered with telcos who did not determine their strategy (or tried to change it later) and ended up with low customer satisfaction, poor staff morale and sub-optimal financial results.

Getting this clear at the outset will then determine not only which areas to build in first, but also how many staff and with which skillsets are hired, and when.

With the official hiring of Eric Alberto as president, the chances of Dito's strategy being a 'copycat' of the incumbents, is low.

APPENDIX 3: PROPOSAL TO STREAMLINE CELL TOWERS PERMIT PROCESS

If the government's supplementary pandemic recovery measure is enacted into law, telcos will need far fewer permits to build cell sites for 3 years

Source: <https://rappler.com/nation/drilon-says-bayanihan-recovery-as-one-act-suspend-many-permit-requirements-telco-towers>

The Government's immediate recovery measure for the COVID-19 pandemic will suspend for 3 years many of the permits required of telcos to build cell towers, Senate Minority Leader Franklin Drilon said on 15 August 2020.

The conference committee of the Senate and the House of Representatives adopted Drilon's proposed provision "to suspend certain permits, except the building permit," for telco towers.

In case homeowners' associations of private subdivisions oppose the building of a telco tower, the Barangay Council may call a referendum on the matter.

Telcos are currently required to secure 29 to 35 documentary requirements and permits for every cell tower they propose to build.

Those include the consent of the neighbours, Barangay resolution, certificate of non-coverage, zoning clearance, height clearance, radiation evaluation studies, building permit, a city or municipal resolution, occupancy permit, mayor's permit, and a memorandum of agreement with the Department of Environment and Natural Resources.



A STUDY INTO THE
PROPOSED NEW
TELECOMMUNICATIONS
OPERATOR IN THE
PHILIPPINES:
CRITICAL SUCCESS FACTORS AND LIKELY RISKS