



The State of Philippine Internet

And what we can do about it

Gio Bacareza, GetaFIX.ph

APIX Meeting #27

26 Feb 2023 | Manila, Philippines

Agenda

→ Current State of the Internet in the Philippines

- ◆ Statistics on internet penetration, speed, and affordability

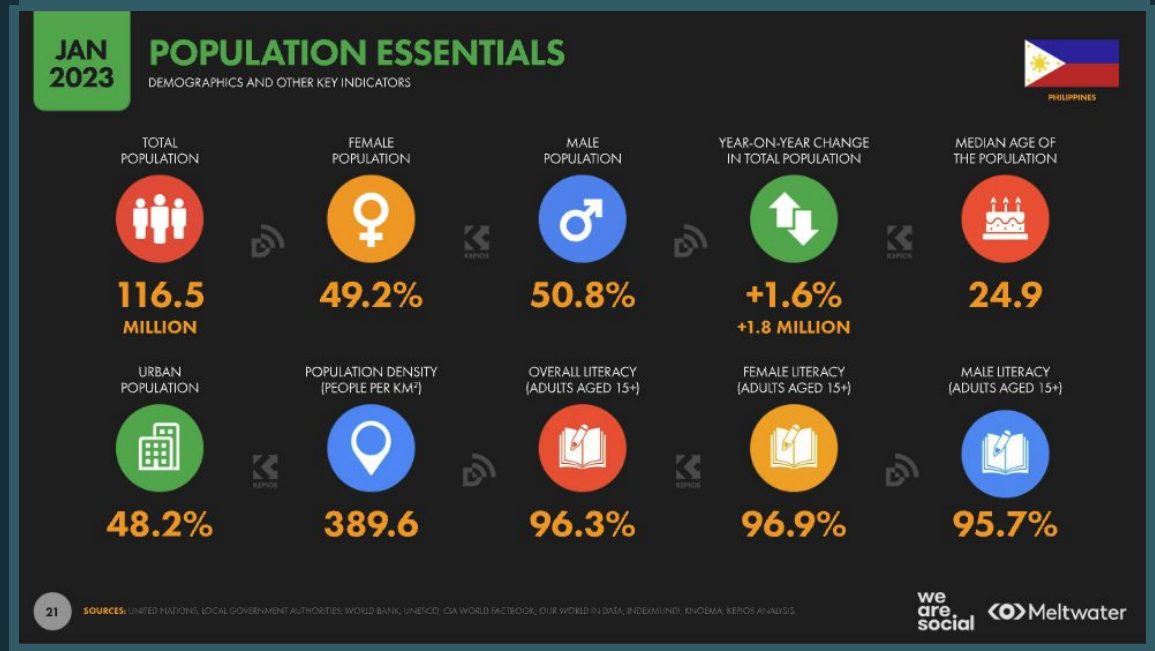
→ Solutions for Improving the Internet in the Philippines

- ◆ Infrastructure improvements and updates
- ◆ Regulatory updates

→ Conclusions

INSIGHT

Huge, growing, young, urban, dense and highly literate population



INSIGHT

...who love socializing and singing!



PHILIPPINE AVERAGE

Time Spent Using Social Media

3H 43M

YEAR-ON-YEAR CHANGE

-9.0% (-22 MINS)

Time Spent Listening to Music Streaming Services

2H 05M

YEAR-ON-YEAR CHANGE

-4.6% (-6 MINS)



GLOBAL AVERAGE

Time Spent Using Social Media

2H 31M

YEAR-ON-YEAR CHANGE

+2.0% (+3 MINS)

Time Spent Listening to Music Streaming Services

1H 38M

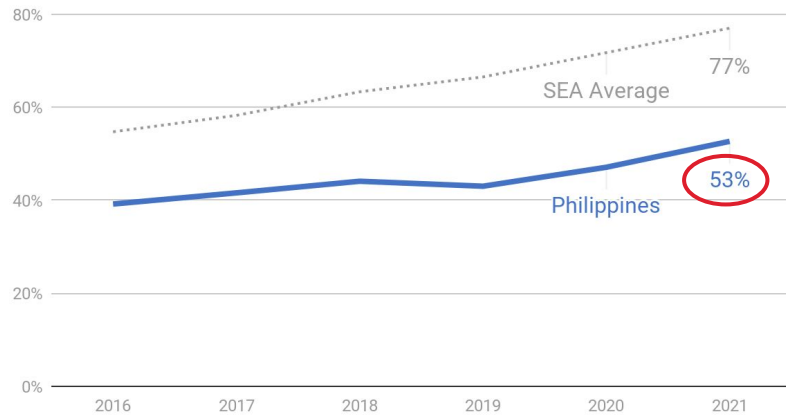
YEAR-ON-YEAR CHANGE

+5.4% (+5 MINS)

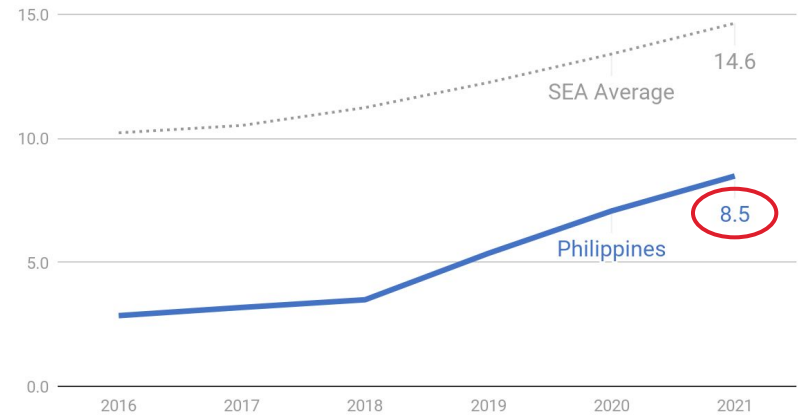
PROBLEM

While Internet access has improved, we are still lagging behind our neighbors

Percent Individuals Using the Internet



Fixed broadband subscriptions (per 100 people)



PROBLEM

We still have a long way to go in Internet Quality



Median Fixed Broadband Download Speeds (Mbps)

67.3



PHILIPPINES

108.7

SOUTHEAST ASIA



Median Mobile Broadband Download Speeds (Mbps)

21.3



PHILIPPINES

35.2

SOUTHEAST ASIA

PROBLEM

Internet here is still relatively expensive

Cost of 5GB Fixed Broadband as % of GNI per capita

11.6%

 PHILIPPINES

4.9%

SOUTHEAST ASIA

Cost of 1GB Mobile Broadband as % of GNI per capita

2.0%

 PHILIPPINES

1.0%

SOUTHEAST ASIA

The Manila Times[®]

OPINION NEWS REGIONS WORLD BUSINESS SPORTS ENTERTAINMENT LIFESTYLE THE S

News > Nation

Starlink now available in PH

By Francis Earl Cueto  February 23, 2023  1140

QUESTION

Access yes,
quality yes,
but affordable?

\$ Starlink Prices

PHP
29,320

≈\$500

FOR DEVICE

PHP
2,700

≈\$50

MONTHLY

Solutions for Improving the Internet for the Philippines

Challenges and Opportunities

1 Infrastructure

2 Regulations

Infrastructure Updates

1 New International Subsea Cables

2 New National Backbones

3 Growth in Terrestrial Fiber

4 New Data Centers

5 Expansion of IXPs in provincial areas like Cebu and Davao

International Cable Systems

10

↑2

BUILT SINCE COVID

7

PLANNED

SUBSEA CABLES

9

↑2

BUILT SINCE COVID

3

PLANNED

CABLE LANDING STATIONS

Reference: www.submarinecablemap.com

PAGUDPUD
CAP-1
2024

LA UNION
AAG
2009

SEA-H2X
2024

CAVITE

EAC-C2C
2002

BATANGAS

SeaMeWe-3
1999

APCN2
2001

SJC
2013

ADC
2023

ALC
2025

BALLESTEROS
TGN-IA
2009

AURORA
PLCN
2022

DAET
JUPITER
2020

ASE
2012

DAVAO
SEA-US
2017

Bifrost
2024

APRICOT
2024

ACC-1
2025

GETAFIX

Domestic Backbone

NATIONWIDE

PDSCN - Philippine Domestic Submarine Cable Network

CDSCN - Converge Domestic Submarine Cable Network

DFON - Domestic Fiber Optic Network

FOBN - Fiber Optic Backbone Network

NDTN - National Digital Transmission Network

NGCP - National Grid Corporation

VISAYAS-MINDANAO

Boracay - Palawan Submarine Cable System

Sorsogon - Samar Submarine Fiber Optical Interconnection Project

Palawan - Iloilo Cable System



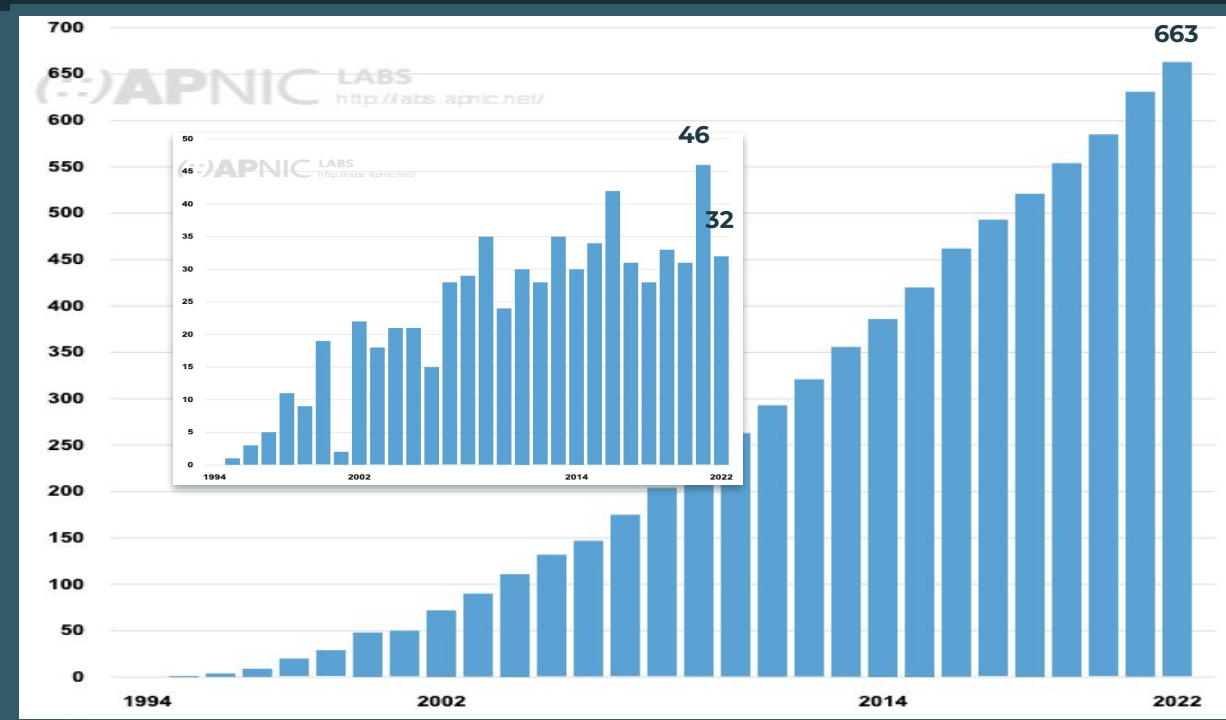
LAST 10 YEARS:

2021 was record year.

DATA

Ph ASNs

Continuous growth of new networks **driven by Peering!**



Who are these networks?

TELCO ISPs Multi-service providers / Mobile Operator

ISPs Internet Service Providers

Cable TV Cable TV providers offering Internet Services

Enterprise Managed infrastructure (Businesses)

Academe Managed infrastructure (Schools/Research)

Government Managed infrastructure (Government)

PAPTELCO Managed infrastructure (Private)
Philippine Association of Private Telecommunications Companies

IXP & DC Landscapes

9

IXPs

↑2

BUILT SINCE COVID

6

PLANNED

16

DATA CENTERS

↑2

BUILT SINCE COVID

4

PLANNED

Reference: [peeringdb.org](https://www.peeringdb.org), JLL, Ariston

IXPs

MANILA

BAYANTEL
BGP.Exchange
GetaFIX
GIX/NIGX
PCTA-IX
PHIX
PhOpenIX
ComclarkIX*
MIX*
VIX*

CEBU

GetaFIX
GIX
PhOpenIX*
VIX*

*DAVAO

GetaFIX*
GIX*
PhOpenIX*
VIX*

Data Centers

LUZON

Beeinfotech
Digital Edge
Flow Digital
SpaceDC
STT
YCO Cloud Centers
Comclark
DataOne
Eastern
Communications
MSI-ECS
Globe Telecom
PHCOLO
PLDT +1
TIM

VISAYAS-CEBU

Globe Telecom
PLDT
Converge
STT

MINDANAO-DAVAO

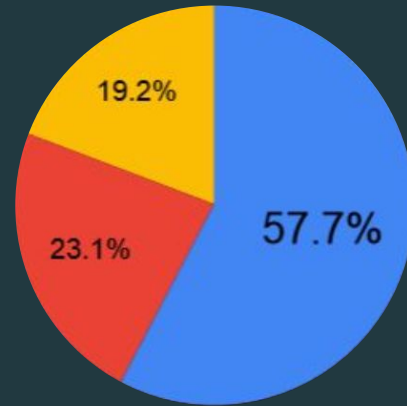
Globe Telecom
PLDT
STT

GETAFIX

*No entries in peering.db

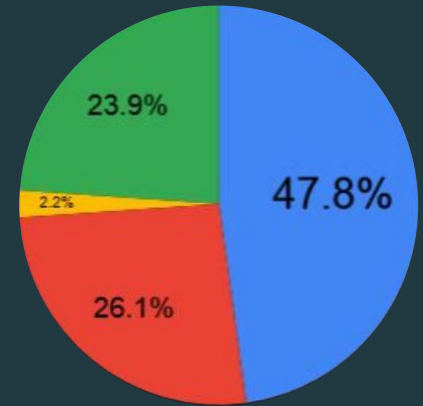
**Traffic remains
Asia centric
(Historically US) -
PNI port size
increases (100G)**

Global IX Connectivity



● ASIA ● US ● EUROPE

Asia IX Connectivity



● ASIA ● US ● EUROPE

Local IX & Peering Perspectives:

MEMBERS

+41

GetaFIX
From 2019

+5

GIX
BY 2021

UPGRADES

Port Upgrades

1G to 10G
nx10G

10G to 100G

Bilateral Session

LOCATIONS

GetaFIX (Cebu)

GIX (Cebu & Davao)

PhOpenIX (Cebu & Davao)

VIX (Cebu)

Peers with Multiple Sessions

PARTNERSHIPS

GetaFIX + DE-CIX



Philippines in Numbers

vs Pre-COVID (2020)

7,641

ISLANDS (HIGH TIDE)

2,000

INHABITED (26%)
THREE MAJOR ISLAND GROUPS

116.5M

POPULATION +3.4M
(AS OF NOV 4 2021)

Manila

CAPITAL

10

SUBSEA
CABLES

↑2

BUILT SINCE COVID

7

PLANNED

663

AUTONOMOUS SYSTEM NUMBER (ASNs)

↑103

9

CABLE
LANDING STATIONS

↑2

BUILT SINCE COVID

3

PLANNED

9

IXPs

↑2

BUILT SINCE COVID

6

PLANNED

16

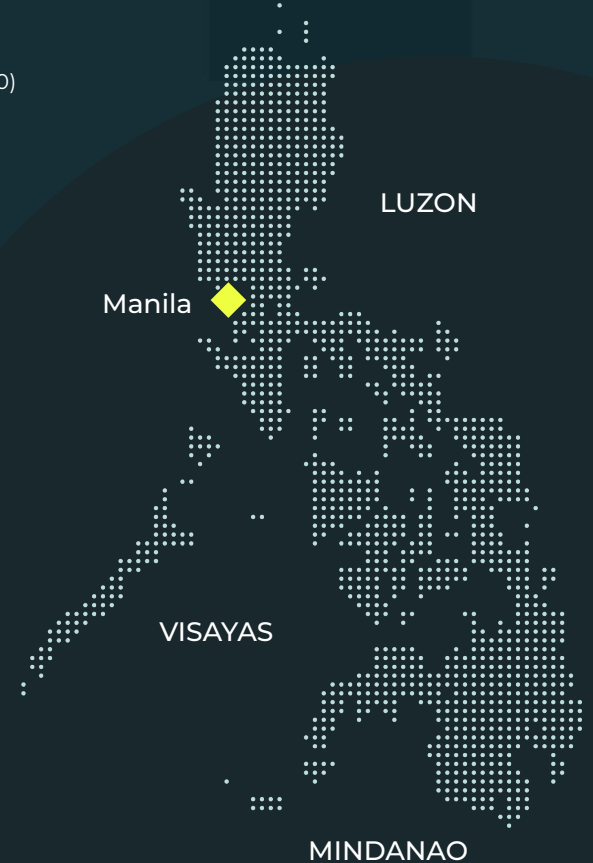
DATA CENTERS

↑2

BUILT SINCE COVID

4

PLANNED



LUZON

Manila

VISAYAS

MINDANAO

**But we still
have a problem...**

PH ISPs

IP Allocation (IPv4)

Majority of IPv4 space still managed by Globe and PLDT, but growth and demand drives good competition (or vice versa)

NEW PLAYERS / REBRAND / EXPANSION

AS 139831

DITO


(3rd Player)

LEGEND

 PLDT

 Cable TV Providers
Offering Internet Services

 GLOBE

 Radius (Power utility)
WiFi City = SourceTel
PT&T ... Fiber

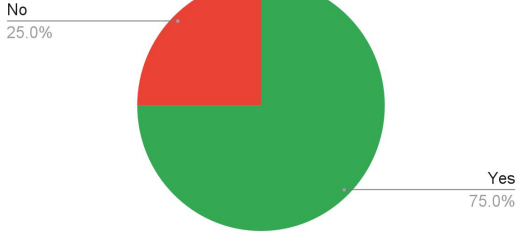
ASN	NETWORK	IPs
AS9299	Philippine Long Distance Telephone Company	3,023,616
AS4775	Globe Telecoms	679,168
AS6648	Bayan Telecommunications, Inc.	365,568
AS132199	Globe Telecom Inc.	314,368
AS17639	Converge ICT Solutions Inc.	297,728
AS9658	Eastern Telecoms Phils., Inc.	267,520
AS10139	Smart Broadband, Inc.	176,384
AS7629	EPLDT	173,568
AS23944	SKYBroadband SKYCable Corporation	131,072
AS3550	Ateneo de Manila University	63,488
AS17970	SKYBroadband SKYCable Corporation	49,152
AS55821	RADIUS TELECOMS, INC.	47,104
AS23930	IP-Converge Data Center, Inc.	38,144
AS18190	SunValley New Oriental	29,440
AS45754	Clear Path Networks Inc	17,408
AS9927	A Multihomed ISP Company	17,408
AS56207	ComClark Network & Technology Corp	16,384
AS4759	TEXTRON CORPORATION	16,384
AS17895	Globalreach eBusiness Networks, Inc.	16,128
AS56099	Asian Vision Cable	15,360
AS135607	Infinivan Incorporated	14,080
AS17894	AyalaPort Makati, Inc. / Data Center Operator	13,312
AS38325	WTP	13,056
AS134707	RoyalCable Flash	11,264
AS18187	Source Telecoms Inc.	10,240
AS18233	Philippine Telegraph and Telephone Corporation,	10,240
AS9821	Department of Science and Technology	10,240
AS38553	Internet Service Provider and Data Center	9,984
AS45499	Cablelink & Holdings Corp.	9,216

OPPORTUNITY

While top ASNs appear to peer openly, in terms of share of eyeballs, most are not.

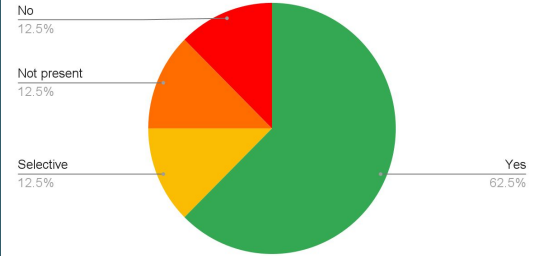
Peers Openly Domestically

Of top ASNs, Count of ASNs



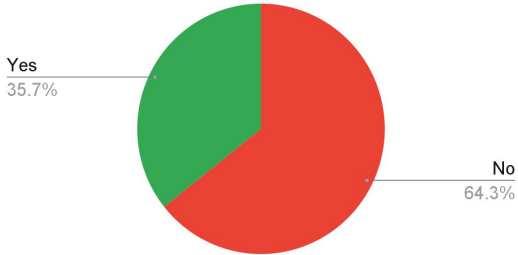
Peers Openly Internationally

Of top ASNs, Count of ASNs



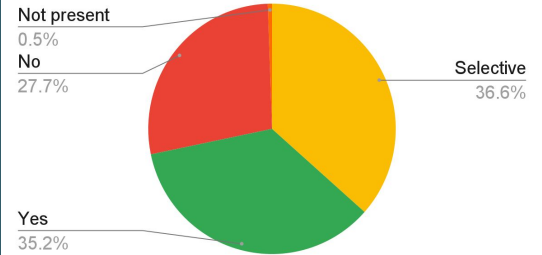
Peers Openly Domestically

Of Top ASNs, Share of Users



Peers Openly Internationally

Of Top ASNs, Share of Users



CHALLENGES & OPPORTUNITIES

Regulatory Updates

- 1 Amendment to Public Services Act and Foreign Investments Act
- 2 Open Access in Data Transmission Bill
- 3 Better Internet Act
- 4 Rural Wired Development Act
- 5 Philippine Spectrum Management Act

Conclusion

1

While the winds are changing

2

Industry players to work together

3

We got our work cut out for us. We still got a way to go.

Special Thanks

Achie Atienza, *GIX, PHNOG*

Mary Grace Mirandilla-Santos

Better Internet PH

Dylan Clear, *GetaFIX, RISE*



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