



PH PERSPECTIVES

Enhancing Peer-to-peer and Remote Connections;
Administering and Securing Independent Infrastructures

Achie Atienza

VNIX-NOG 2025

Sheraton Nha Trang Hotel & Spa, Vietnam

17 October 2025



Achie Atienza

KAMUSTA ! :)



Globe Telecom

Peering, Interconnection & Strategy
IP Ecosystem

Internet Society Philippines (ISOC-Ph)

Board of Trustee

Philippine Network Operators Group (PhNOG)

Chairperson

Asia Pacific Network Information Centre (APNIC)

APNIC Executive Council (APNIC EC)

Asia Open RAN Academy (AORA)

Chairperson

DISCLAIMER



PH IN NUMBERS

7,641 Islands | 116.8m population

19

International Submarine
Cable systems

868

Autonomous System Number
(ASNs)

13

Local Internet
eXchange Points (IXPs)

10

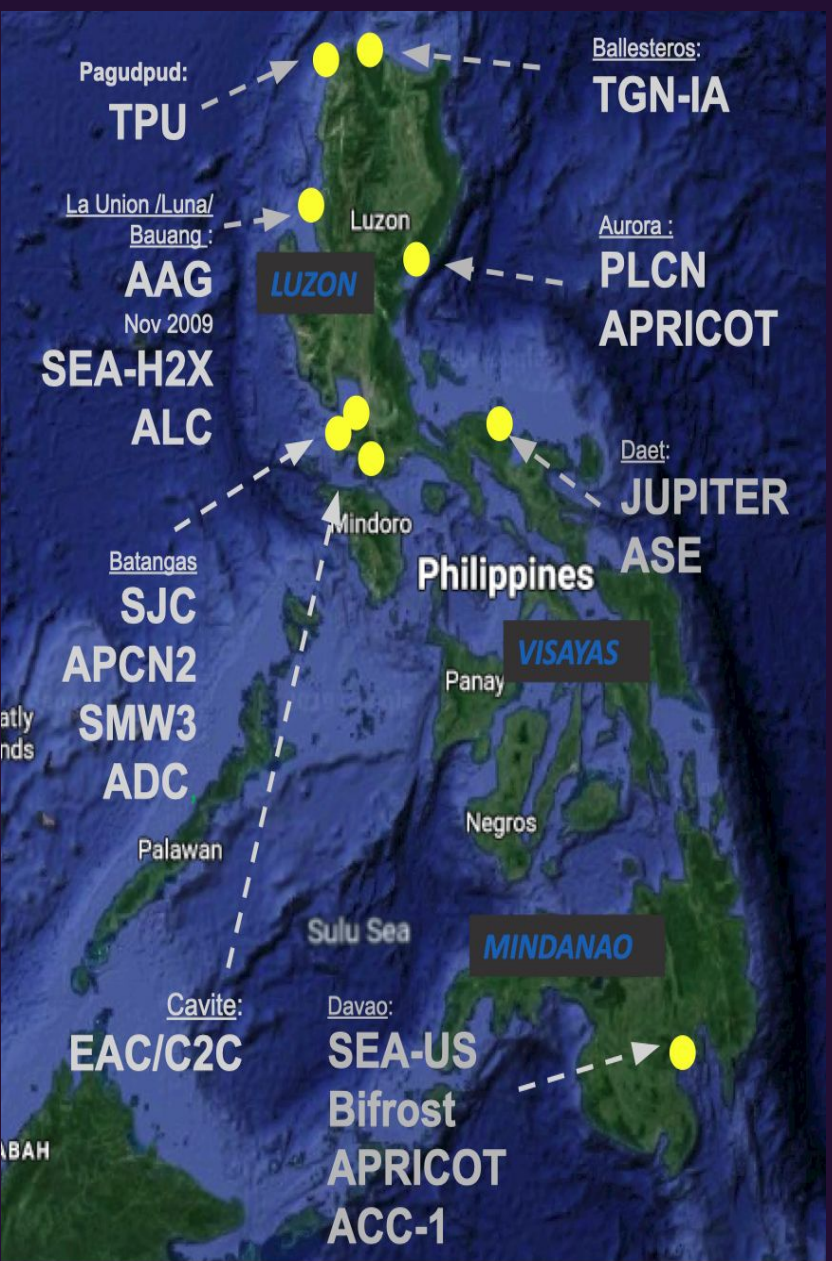
International Cable
Landing Stations (CLS)

19

Data Center (DC)
Facilities

PH CORE INFR A STRUCTURE / BACKBONE

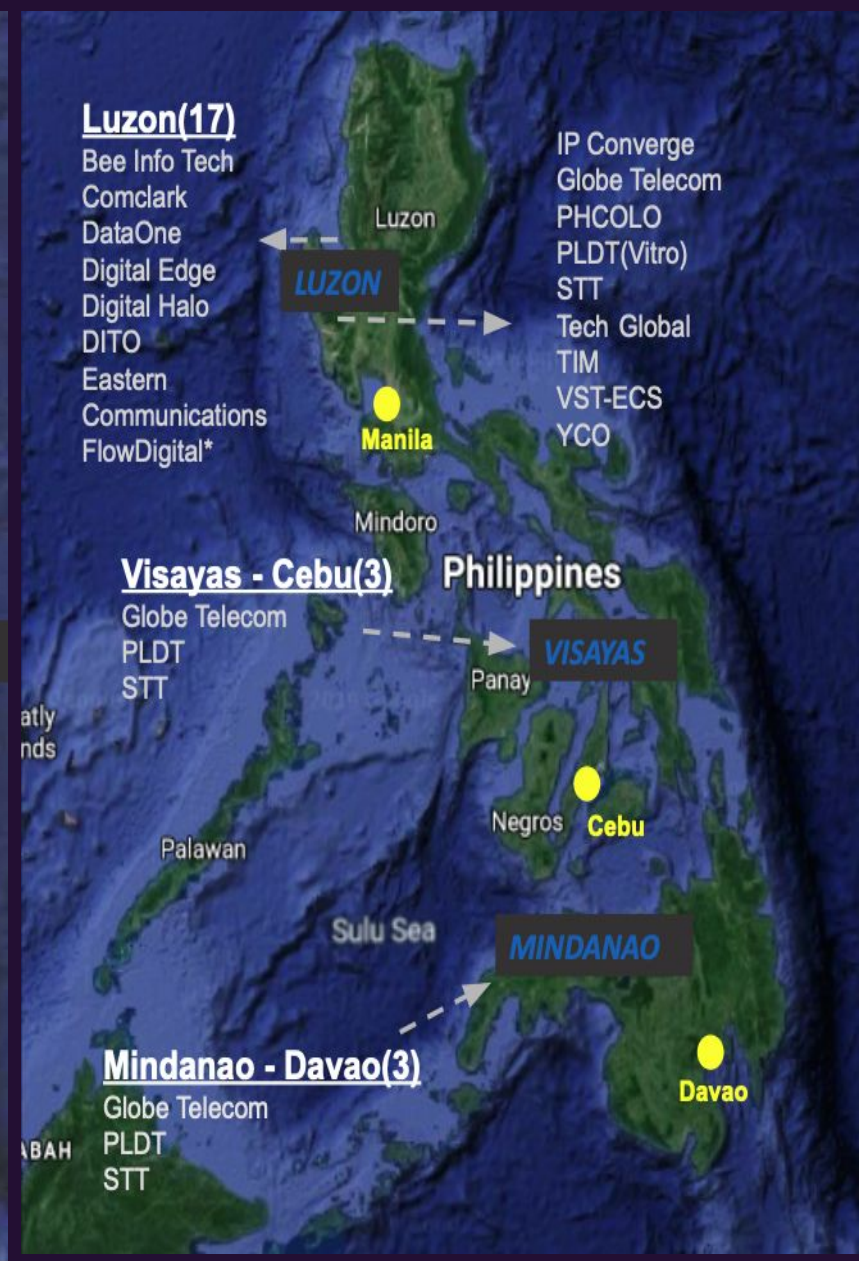
INTERNATIONAL CABLE SYSTEMS



DOMESTIC TRANSPORT



DATA CENTER FACILITIES



INTERCONNECTION PRINCIPLES

ARCHIPELAGO

ANY Connectivity (Wireless/Wired)... strings & cans

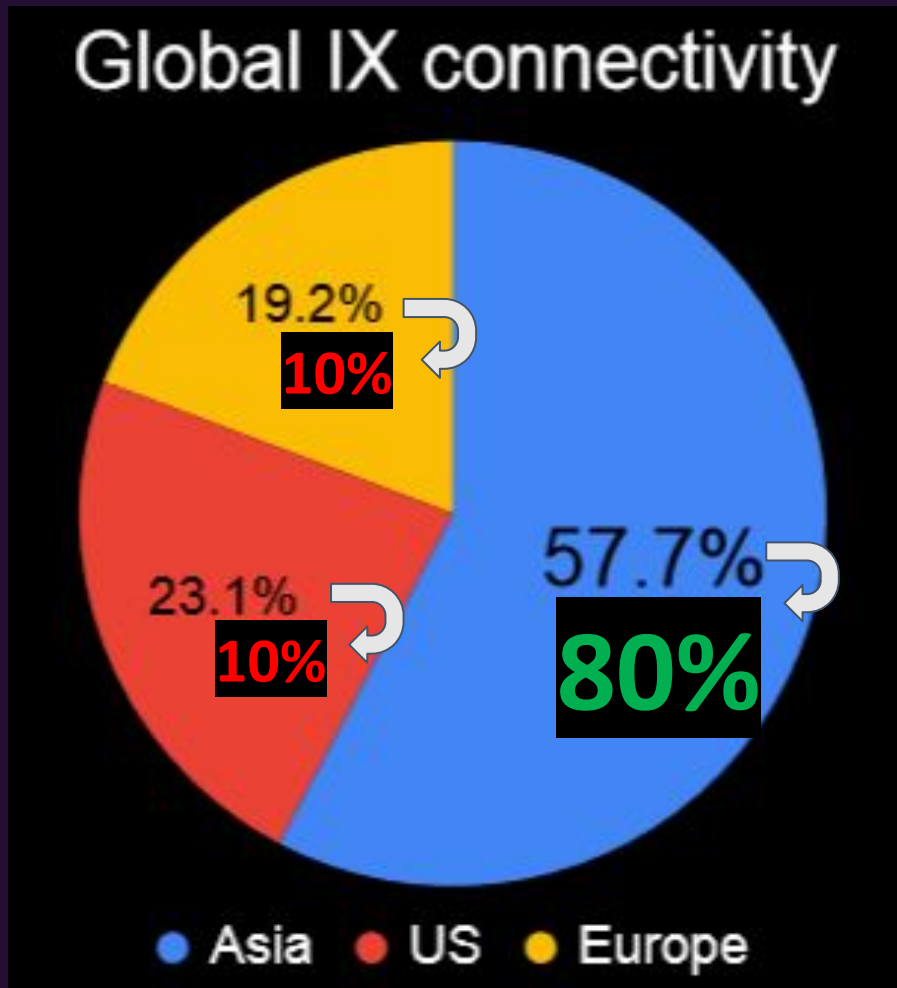
PEERING PREREQUISITES

ASN, IP ADDRESS (basic requirements)

(continuous) OPTIMIZATION

Automation vs Relationship

INTERCONNECTION (INTERNATIONAL)



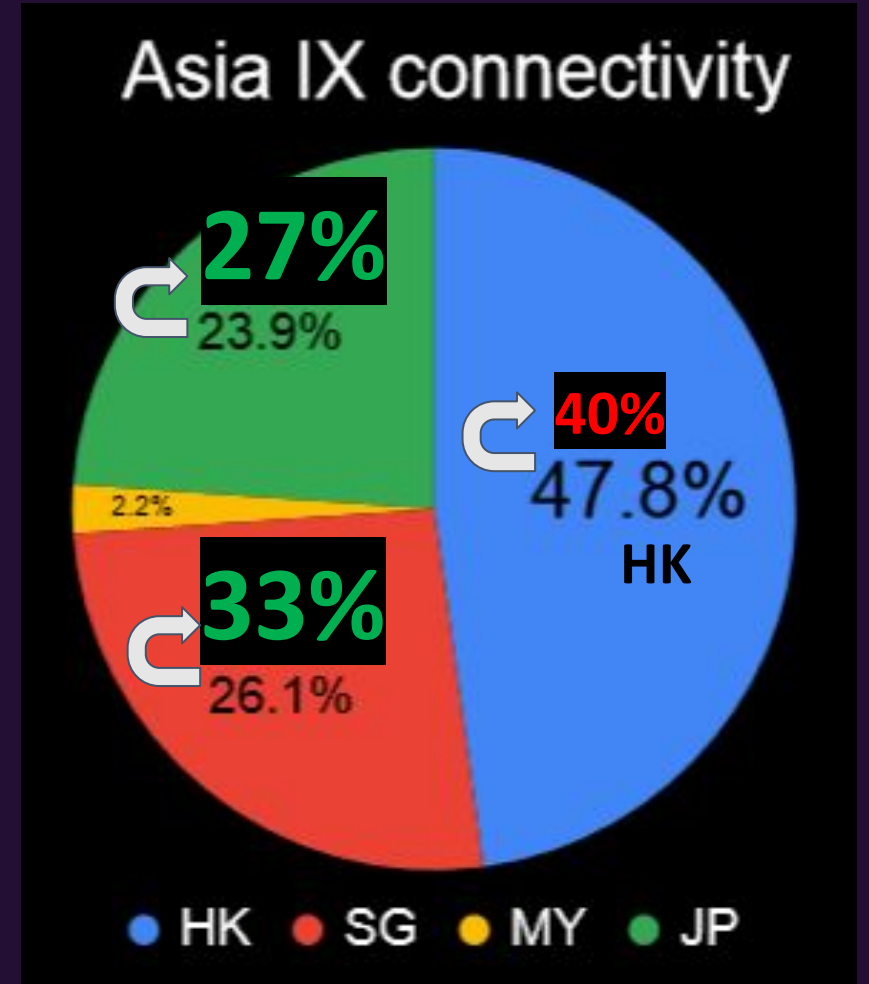
(Historically)
US centric

Traffic
to
ASIA



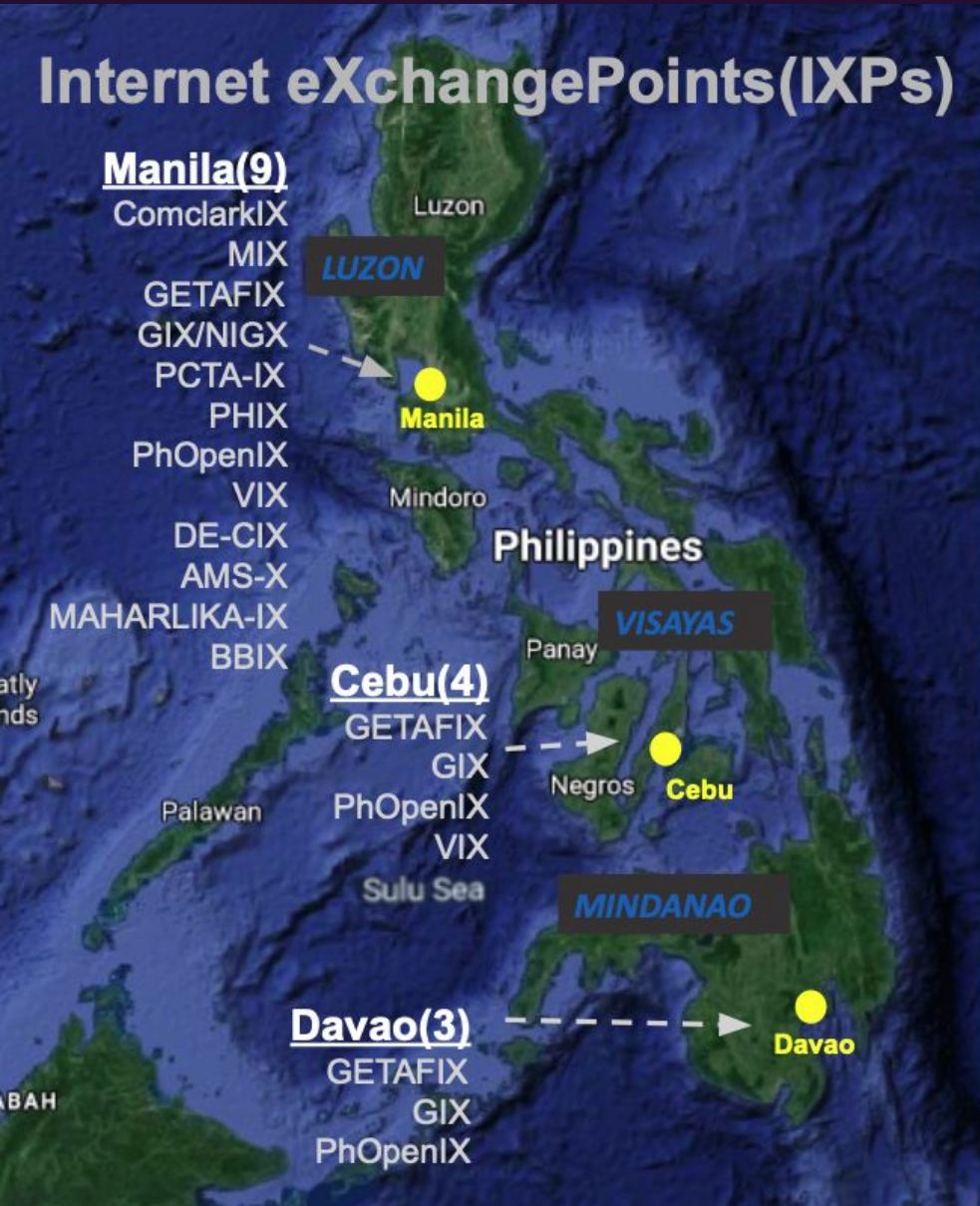
but...
still

US* Content
(predominantly)



INTERCONNECTION (DOMESTIC)

Internet eXchangePoints (IXPs)



Ph ISPs

by local function

Not all are “commercial Service Providers”

Telco ISPs

Multi-service providers / Mobile Operator(MNO)

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

Interconnect options: objective/resource dependent
 via **IXP(RS, Bilat)**, **PNI**, **Remote Peering**,
DIA(if no ASN), **IPT**

IPV6 LANDSCAPE: INSIGHTS

IXP Connectivity : **Dual stack** (significantly)

PNIs : **Dual stack** (mainly)

Regulatory Support:

MALACAÑAN PALACE
MANILA

BY THE PRESIDENT OF THE PHILIPPINES

[EXECUTIVE ORDER NO. 893, June 18, 2010]

PROMOTING THE DEPLOYMENT AND USE OF INTERNET PROTOCOL VERSION 6 (IPV6)



Office of the President of the Philippines
COMMISSION ON INFORMATION AND COMMUNICATIONS TECHNOLOGY

MEMORANDUM CIRCULAR No. 01

Subject: **Implementing Rules and Regulations (IRR)** of Executive Order (E.O) No. 893 – Promoting the Deployment and Use of Internet Protocol Version 6 (IPv6)



PS-PhilGEPS

<https://ps-philgeps.gov.ph> · home · BAC · Postings

Bidding Documents

IPv6 - **Must support IPv6**, include authentication, application, bandwidth management, content audit and report. □. Bypass Mode - Must support hardware bypass ...



You are visiting from **2001:fd8:403:bda2:8567:90ae:15f1:da2b**

Announced as **2001:fd8:400::/42** (Globe Telecom Inc.)

Announced as **2001:fd8::/32** (Globe Telecom Inc.)

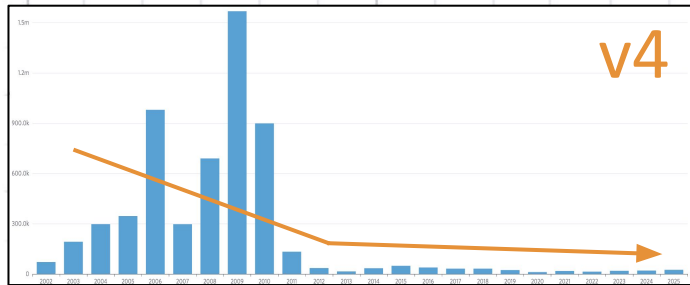
Mobile Network

Your ISP is **AS132199** (Globe Telecom Inc.)



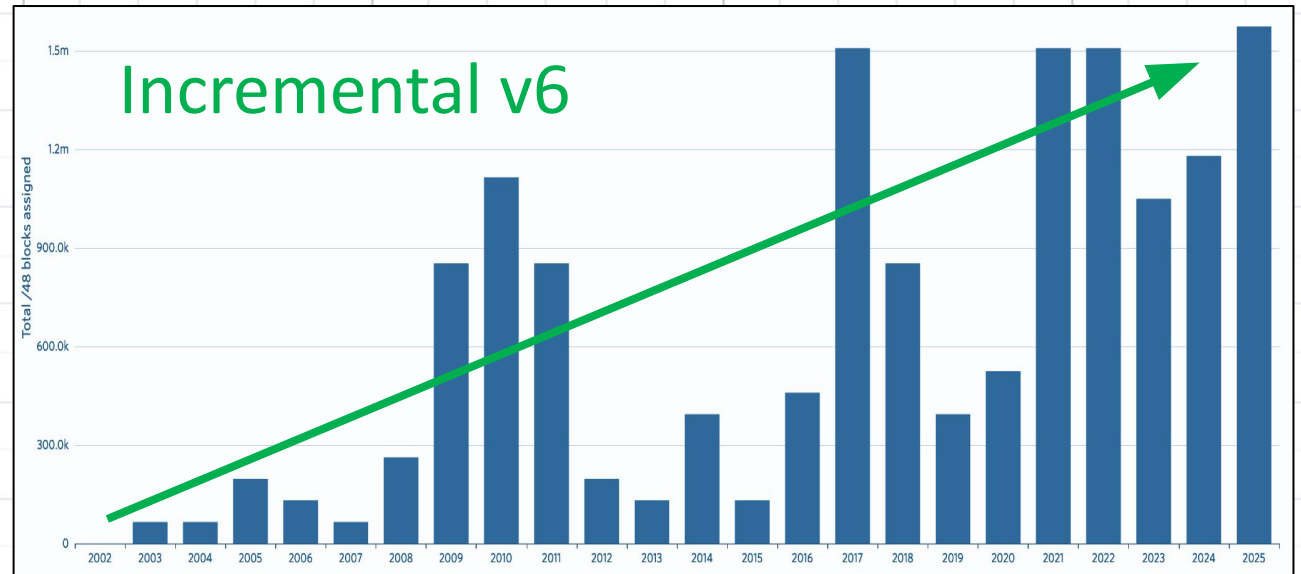
IPV6 LANDSCAPE: INSIGHTS

(:~:) APNIC LABS
<http://labs.apnic.net/>



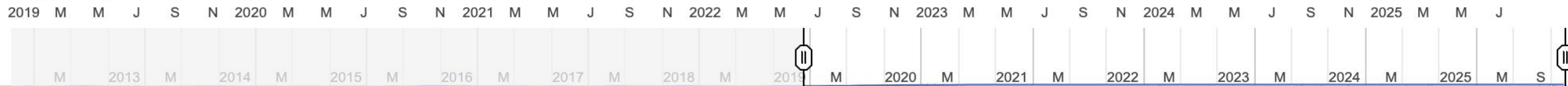
v4

decrease in v4
"does not mean"
adaption in v6



Incremental v6

v6 capable: 19.84%
v6 preference: 19.29%



INFRASTRUCTURE MANAGEMENT (CONSIDERATIONS)

HALF-TECH

Administrative, Business, Commercial, etc

COMMUNICATION

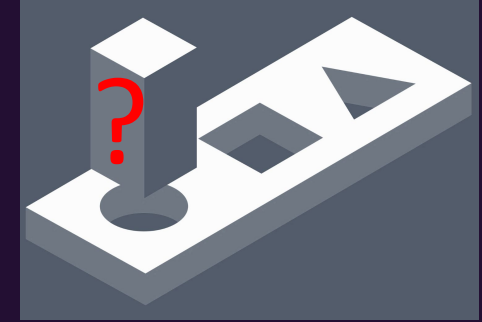
Visualization (MRTG, Grafana, for appreciation and approval)

(beyond) PEERING

Understand your traffic (location, latency, cost, etc)

IN SUMMARY (WHAT WE LEARNED)

No “One size fits all” solution



No Finish Line



The People Network (Community)



A

Collaborative

Holistic

Internet

Ecosystem

Cảm ơn
salamat
Thank you