

About the APNIC Foundation

APRICOT 2023 / APNIC 55
January 2023

Agenda

Overview of Foundation programs and projects in 2023 - Duncan Macintosh, CEO

ISIF Asia and project updates – Sylvia Cadena, Head of Programs and Partnerships

EcolInternet Index – Edmon Chung, CEO Dotasia Foundation

Update on the Switch! Gender and Diversity project – Mia Perez, Switch! National Coordinator for the Philippines

Facilitated by David Dawson, Senior Communications Coordinator

A decorative header featuring a repeating pattern of green triangles and diamonds in various shades of green.

Overview of Foundation programs and projects in 2023

Duncan Macintosh, CEO

The APNIC Foundation

VISION

To have a global, open, stable and secure Internet that is affordable and accessible to the entire Asia Pacific community

MISSION

To increase investment in Internet development in the Asia Pacific region, through education and training, human capacity building, community development, research, and related projects and activities

PROJECTS

- SWITCH SEA
- PacTraining
- ISIF Asia



Investing in Internet development

Some examples of what the Foundation's fundraising efforts focus on:

- Technical training
- Increasing diversity and inclusion
- Network operations research
- Internet infrastructure research and deployment
- Research and Education networks



How the Foundation Works

└ We support these activities ┐

└ To strengthen these communities ┐

└ To achieve these goals ┐

Technical Training
and Assistance

Community Development

Grants and Awards

Internet Infrastructure

Research
and collaboration

Network
Engineers

Security
Professionals

Internet
Governance
Specialists

GLOBAL

OPEN

AFFORDABLE

ACCESSIBLE

STABLE

SECURE

Strategic Plan

Strategic Pillar	Objective
1. MEANINGFUL IMPACT Enhance levels of knowledge, infrastructure development and inclusion within the Asia Pacific technical community	A. INFRASTRUCTURE - Strengthen and support the deployment of Internet infrastructure and deploy tools for operational infrastructure security and monitoring B. INCLUSION - Support/enable the Asia Pacific Internet community in providing meaningful and efficient access to the Internet, from a technical and operational perspective C. KNOWLEDGE - Enhance technical and operational knowledge contributing to an informed and collaborative community
2. TRANSFORMATIONAL ENGAGEMENT & PARTNERSHIPS Raise awareness of Foundation activities through engagement & collaboration. Foster productive partnerships to support Internet development	A. Build and support targeted communities so they sustainably grow and develop independently B. Collaborate in program design and project delivery to ensure meaningful impact, shared value and ongoing improvement C. Engage with the Internet development community to promote key issues and priorities D. Increase and diversify the Foundation's funding and resources by engaging with existing and new partners/investors in support of Internet development E. Expand the Foundation's profile/influence/reputation and capabilities/expertise through proactive communications and networking opportunities
3. HIGH PERFORMANCE Deliver best practice people, finance and business systems that support the Foundation's operations.	A. Strengthen program quality and evidence base B. Implement equitable, accurate and efficient process and systems C. Provide efficient and robust governance, finance and business services D. Deliver an engaged employee lifecycle experience

2023 projects

Partnerships

APNIC

- Capacity development (Academy, Training Delivery, Community Trainers)
- Infrastructure support (M-Root and IXPs)
- Community building (NOGs, CERT support)
- Research (Honeynet, measurements)

Keio University

- SOI Asia
- AI3

Foundation

- Switch! - Gender and diversity project in 6 South East Asia economies
- Afghanistan training and mentoring
- Information Society Innovation Fund (ISIF Asia)
- Foundation grants

A decorative header featuring a repeating pattern of green triangles and diamonds in various shades of green.

ISIF Asia and project updates

Sylvia Cadena, Head of Programs and Partnerships

Foundation Programs



INFRASTRUCTURE

Efforts to increase Internet speed, reduce maintenance and operational costs, improve reliability and/or security from a technical and operational perspective.

Network deployment and operations

Network monitoring and management

Security and privacy



Foundation Programs



INCLUSION

Efforts to ensure that everyone has meaningful and efficient access to the Internet, online applications and services, from a technical and operational perspective.

Availability of connectivity

Internet access affordability

Accessibility

Diversity



Foundation Programs



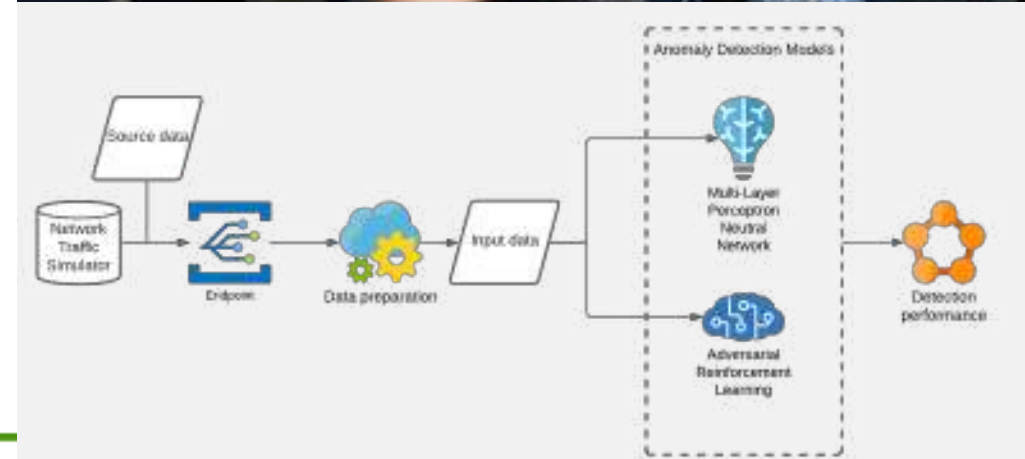
KNOWLEDGE

Efforts to develop technical capacity and/or research around Internet network operations, from a technical and operational perspective.

Professional development

New information and training resources

Translation of knowledge resource into Asia Pacific (APAC) languages



Funding mechanisms available to the community

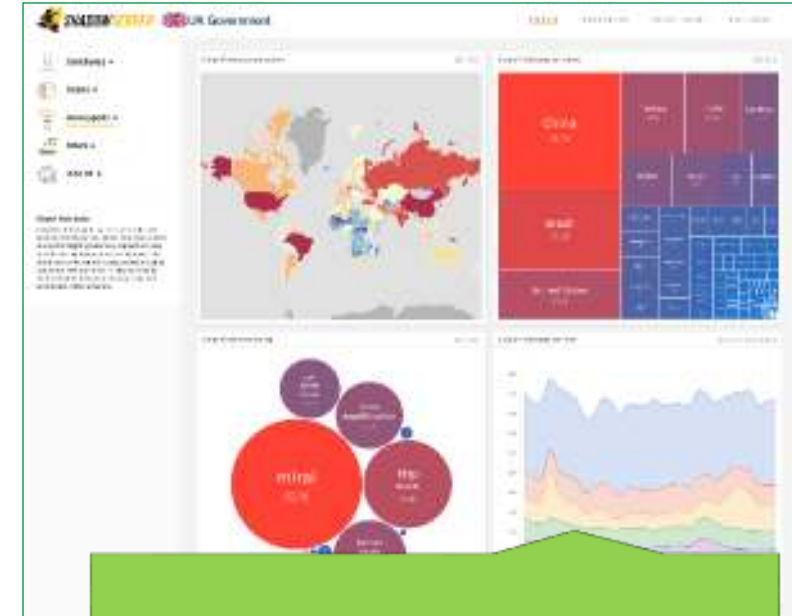


ISIF Asia

Open call for proposals
opening soon



Foundation Grants



Trust Discretionary Funds



isif  **asia**

- The APNIC Foundation's Information Society Innovation Fund was established in 2008
- The fund is available for APAC organizations that research, design and implement Internet development solutions
- **Stay tuned for 2023 Call for Proposals**

ISIF Asia grant recipients in The Philippines

- **Institute for Social Entrepreneurship in Asia, Inc (ISEA) (Philippines)**
IN PROGRESS: Building a model for community networks linked to social enterprise and sustainable local economic development
- **CVISNET Foundation, Inc. (Philippines)**
IN PROGRESS: ISLET Connect
- **Davao Medical School Foundation (DMSF) (The Philippines)**
IN PROGRESS: Internet connection to four villages in San Isidro
- **Ateneo de Manila University, Philippines**
COMPLETED - [UAV-Aided Resilient Communications for Post Disaster Applications: Demonstrations and Proofs of Concept](#)
- **Access Health International (Philippines)**
COMPLETED - [Integrated maternal and child healthcare delivery and training for community health teams](#)
- **Foundation for Media Alternatives (Philippines)**
COMPLETED - [Promoting women's rights and safety online: addressing electronic violence against women \(eVAW\)](#)
- **SynapseHealth (The Philippines)**
COMPLETED - [Health, emergency and disaster information using mobile and virtual earth technology](#)

Funding types



Small Grants	Scale-up Grants	Impact Grants	Deployment Grants	Awards
New ideas Proof of concept Prototyping Research USD 30,000	Addressing challenges around growth / expansion USD 85,000 Including organizational capacity support	Expanding community benefit beyond initial targets USD 150,000 including organizational capacity support	IPv6 deployment plans in different stages of development Variable grant size from USD 30,000 up to USD 250,000	Outstanding Community Contributions USD 5,000

2023 IPv6 Deployment Grants open and accepting applications

What?

Concrete IPv6 plans

Maximize community benefit

Different stages of development

Who?

Network operators in APAC

All industry types

All stakeholder groups

How?

Collaboration encouraged

Lead by APAC organizations

12 to 18 months - up to USD250K

2022 IPv6 Deployment Grants

Boom!, Micronesia: USD 250,000

Boom! Inc. is currently allocated a /23 IPv4 and a /32 IPv6 address block.

Half of the IPv4 address space have been exhausted through the design of the internal core infrastructure along with deploying several key customer networks.

This project will solely focus on improving the design of the backbone infrastructure and IPv6 address allocation, and adoption of best practices for small to large scale customer deployments, with all testing being conducted at their enterprise lab network.

Tonga Communication Corporation, Tonga: USD 250,000

TCC has successfully deployed IPv6 to their fixed networks back in 2018 and adoption is slowly progressing. The project will support the infrastructure deployment to their Mobile Networks as well as support for their billing system to be ready for future 5G network deployments.

2022 IPv6 Deployment Grants

National Institute of Technology Karnataka, India: USD 240,000

NITK Surathkal's campus network migration to IPv6 (45000+ terminals to the Internet with 350+ switches, 1200+ indoor/outdoor WiFi access points and a dedicated data centre hosting firewalls, core switches, web and application servers, servers for DHCP, DNS, IPAM, NAT, network management and monitoring)

- Security auditing/planning and mitigating risks
- Converting web services and applications
- Test, validate and monitor network performance and security

Universitas Islam Indonesia, Indonesia: USD 60,000

Accelerate IPv6 deployment at schools, higher education institutions, and research organizations, through an SDN-based implementation

Ian Peter Grants for Internet and the Environment

Focus Areas

- ✓ **Inclusion:** Support for Indigenous and grassroots organizations working on environmental issues to enhance their work through increased Internet availability
- ✓ **Infrastructure:** Hardware and software development, and/or deployment to understand and address the environmental impact of Internet infrastructure
- ✓ **Knowledge:** Technical research that supports policy development around Internet technologies and climate change

- **ISLET Connect** - CVISNET Foundation, Inc. The Philippines. USD85,000
- **Early warning and communication system for flood risk reduction in Gilgit-Baltistan** - Lahore University of Management Sciences. Pakistan. USD85,000
- **IoT data-driven water management for climate resilient communities** - Similie Timor Lda. Timor Leste. USD85,000
- **EcoInternet index** - DotAsia Foundation Ltd. Hong Kong USD30,000
- **Tackling climate change misinformation** - Faculty of Social and Political Science , Center for Digital Society. Indonesia. USD30,000

ISLET Connect

CVISNET Foundation, Inc.
The Philippines
USD 85,000

- Provide a stable broadband Internet connection to 3 islands barangays
- Provides a reliable solar power communications facility
- Establish a web portal that provides both online and offline information around livelihoods, learning, ecotourism and disaster risk reduction
- Introduce a sustainable community-based support operations
- Can be easily expanded and replicated in the nearby islands



A decorative header featuring a repeating pattern of green triangles and diamonds in various shades of green.

The EcoInternet Index

Edmon Chung – CEO DotAsia Foundation

EcoInternet Index: Towards an Eco-Friendly Internet

Edmon Chung | 2023.02.27 | APRICOT Manila



www.asia

Asian #InspirAsian

A young boy and an elderly woman are sitting on a wooden bench outdoors. The boy is on the left, holding a laptop and looking at the woman. The woman is on the right, looking back at the boy. A cat is sitting on the bench next to a woven basket. The background is a lush green field with trees and a wooden post with a cloth hanging from it. The text ".asia" and "#RiseWithAsia" is overlaid on the right side of the image.

.asia
#RiseWithAsia

What is ".asia"?

www.domain.com

A black and white photograph of a person sitting on a sandy beach, leaning over a laptop. The person is wearing a dark shirt and light-colored pants. The laptop is open, and the person's hands are on the keyboard. The background is a vast, sandy beach with some small rocks and a clear sky.

Every .Asia Domain Contributes
to Internet Development in Asia



www.asia



 HEINRICH
BÖLL
STIFTUNG



www.asia





FACTCHECKS

25 February 2020 ⌚ 13:08

Factcheck: What is the carbon footprint of streaming video on Netflix?

🐦 in f 📡

Enter email address...

Subscribe

PODCASTS

EDITORIAL CALENDAR

ABOUT US

ADVERTISING

CMS WiRE

Channels

Featured Products

Research

Webinars

Software Directory

Events

Search...



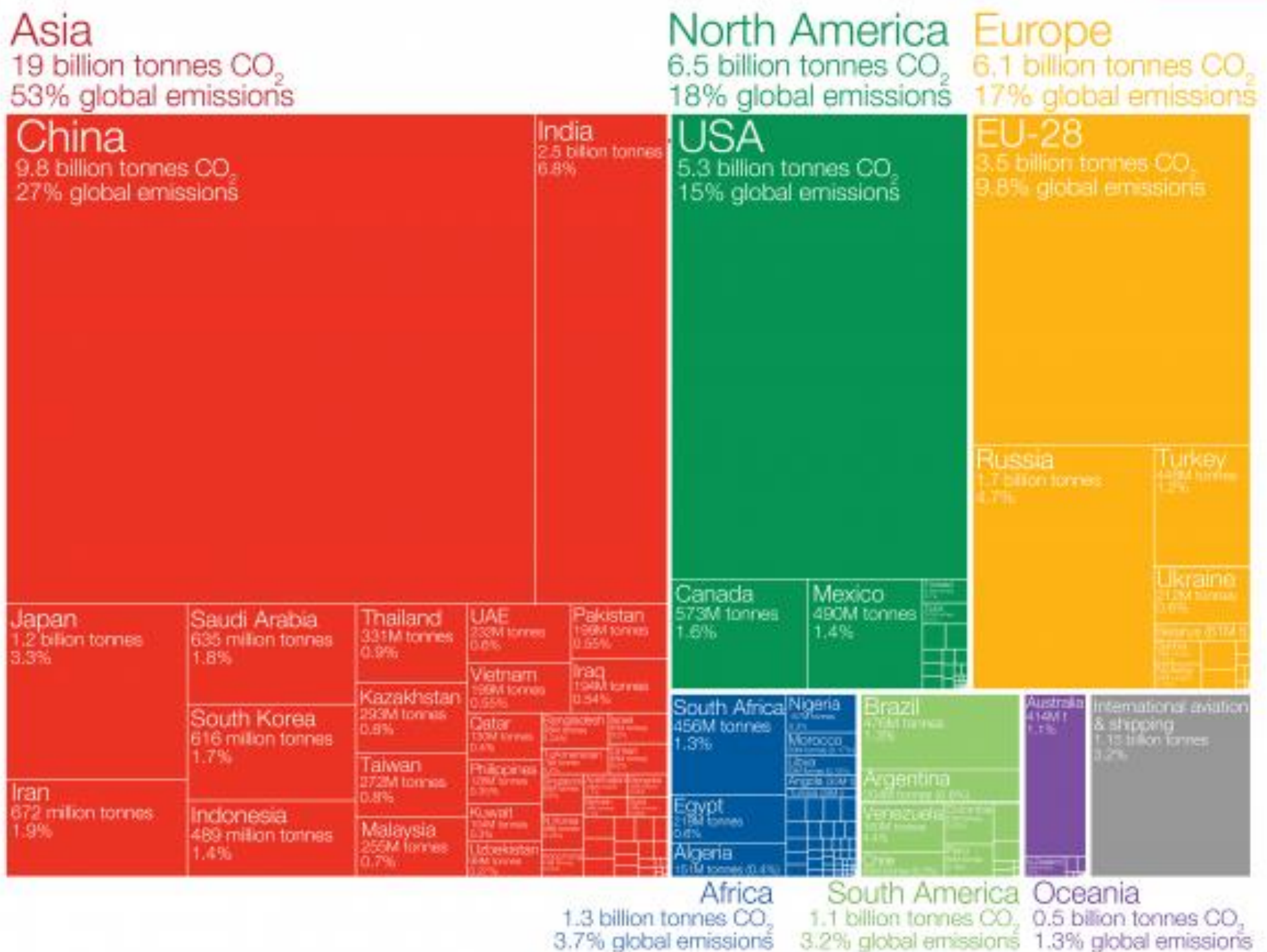
Calculating the Pollution Effect of Data



By Gerry McGovern | Mar 16, 2020

CHANNEL: Digital Experience

Who emits the most CO₂ ?



Group of Advisors:



Cassian DREW

*Managing Director, Inclusive Growth
Advisor on COVID-19
Economic Recovery, UNDP*



George KAMIYA

*Digital/energy analyst at the
International Energy Agency
in Paris*



Kathryn SFORCINA

*Global Head of Strategy, IV.AI
Co- Chair, UN IGF Policy
Network for Environment and
Digital*



**Kavickumar
MURUGANATHAN**

*Sr Manager, Asia Datacenter
Sustainability Policy,
Microsoft*



Desiree MILOSHEIC

*International Affairs and
Policy Adviser at Afiliis
Former Special Advisor to the
Chair of the UN IGF MAG*



Sang Min SHIM

*Visiting research fellow,
Sejong Institute
Former Assistant Professor of
Korean National Diplomatic
Academy*



David JENSEN

*UNEP Head of Environmental
Peacebuilding*



Anna MOORE

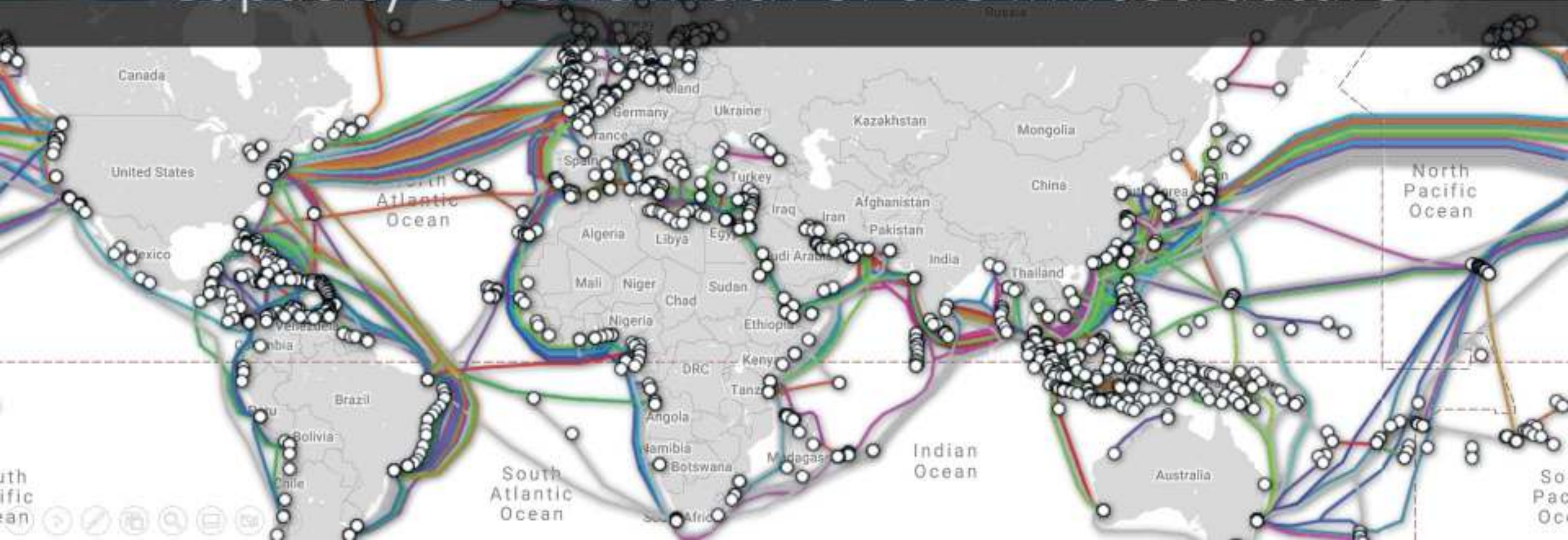
*Sustainability Consultant and
Partnerships Manager, Eco-
Business*







The Power Grid as a Critical Component

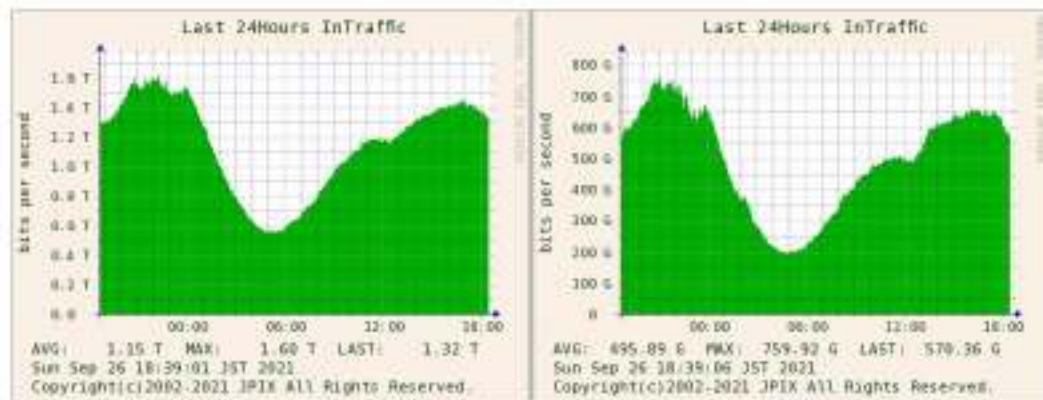
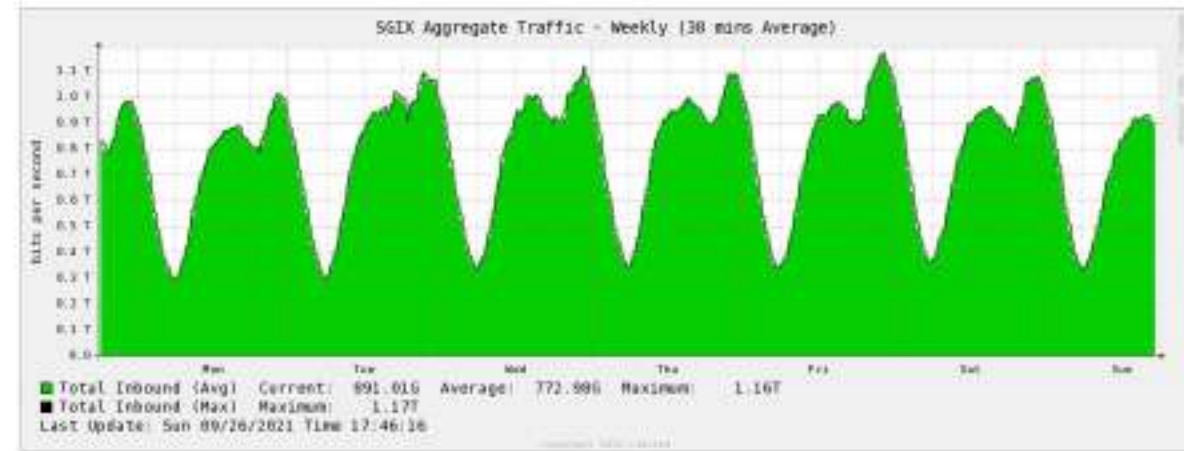
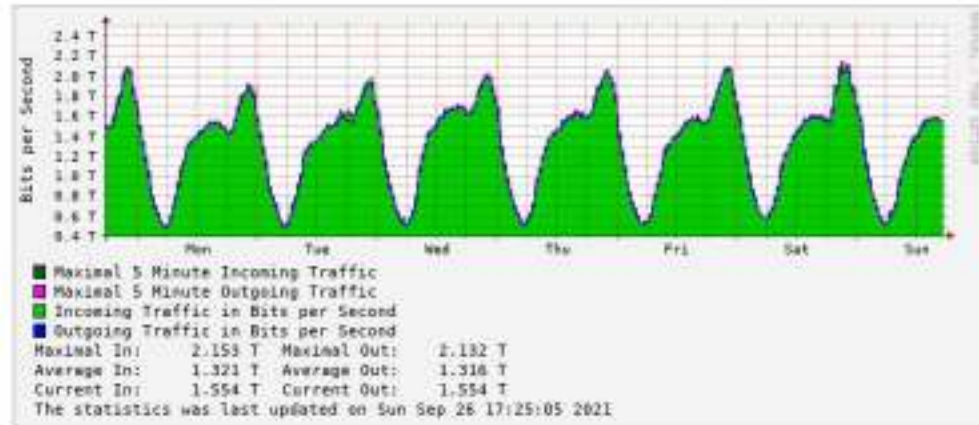


DIGITAL ECONOMY

ADVANTAGE



Variances (Peak & Troughs) in Internet Traffic Patterns



Aggregated traffic graphs for all locations



Population

World Population



Internet Population

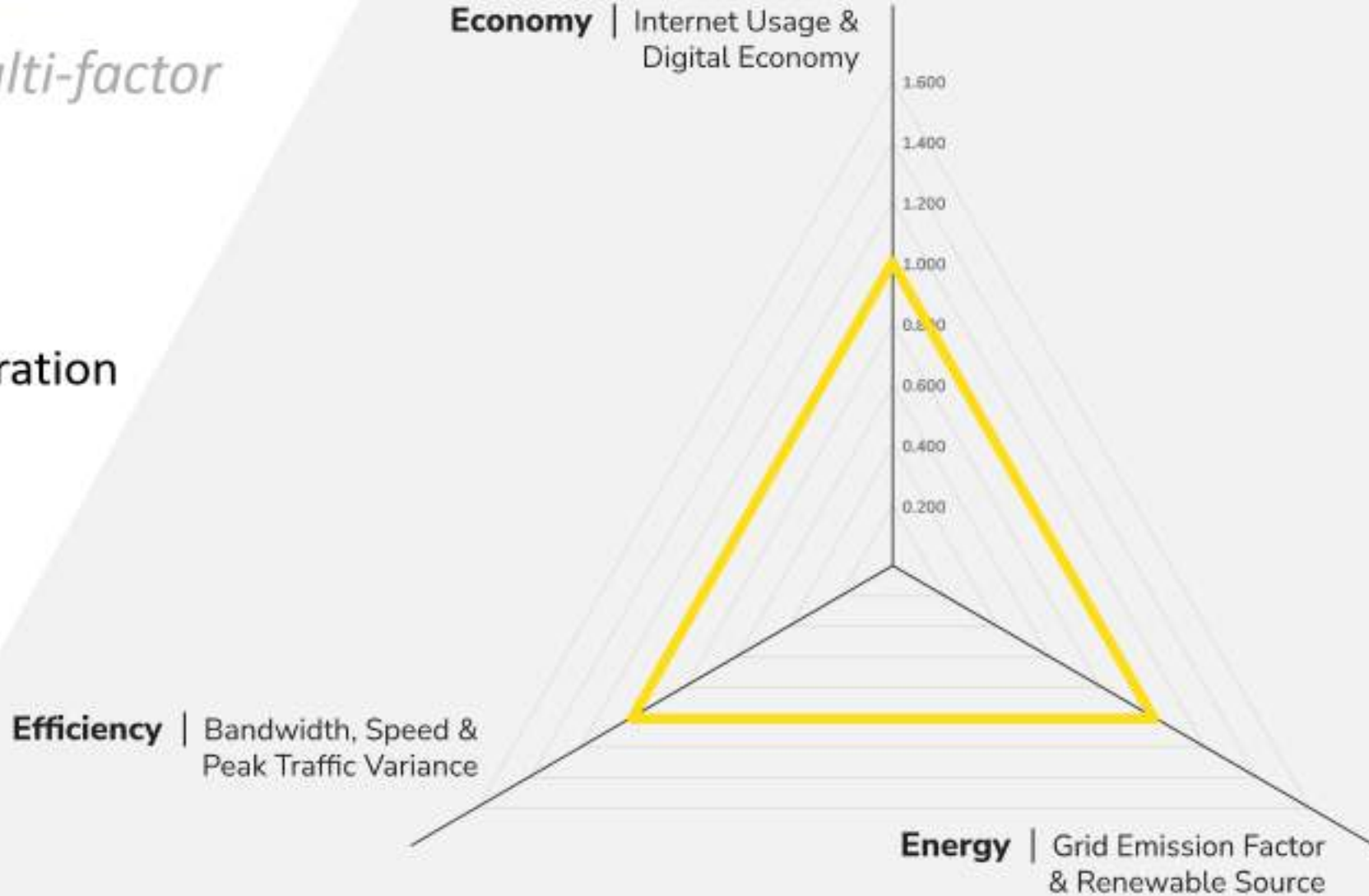
World Internet Population

Internet Presence Advantage



Additional Indicators

- *Towards a composite multi-factor index*
- **Economy**
 - Internet Usage patterns
 - Digital Economy Consideration
- **Energy**
 - Grid Emission Factor
 - Renewable Sources
- **Efficiency**
 - Network Capacity, Speed & Variance



Economy

- Carbon Footprint of Internet Activities vs. Digital Economy

Carbon Footprint of Internet Activities

Total Carbon Emission

*ICT Services as % of Total Trade in Services
(Export + Import)*

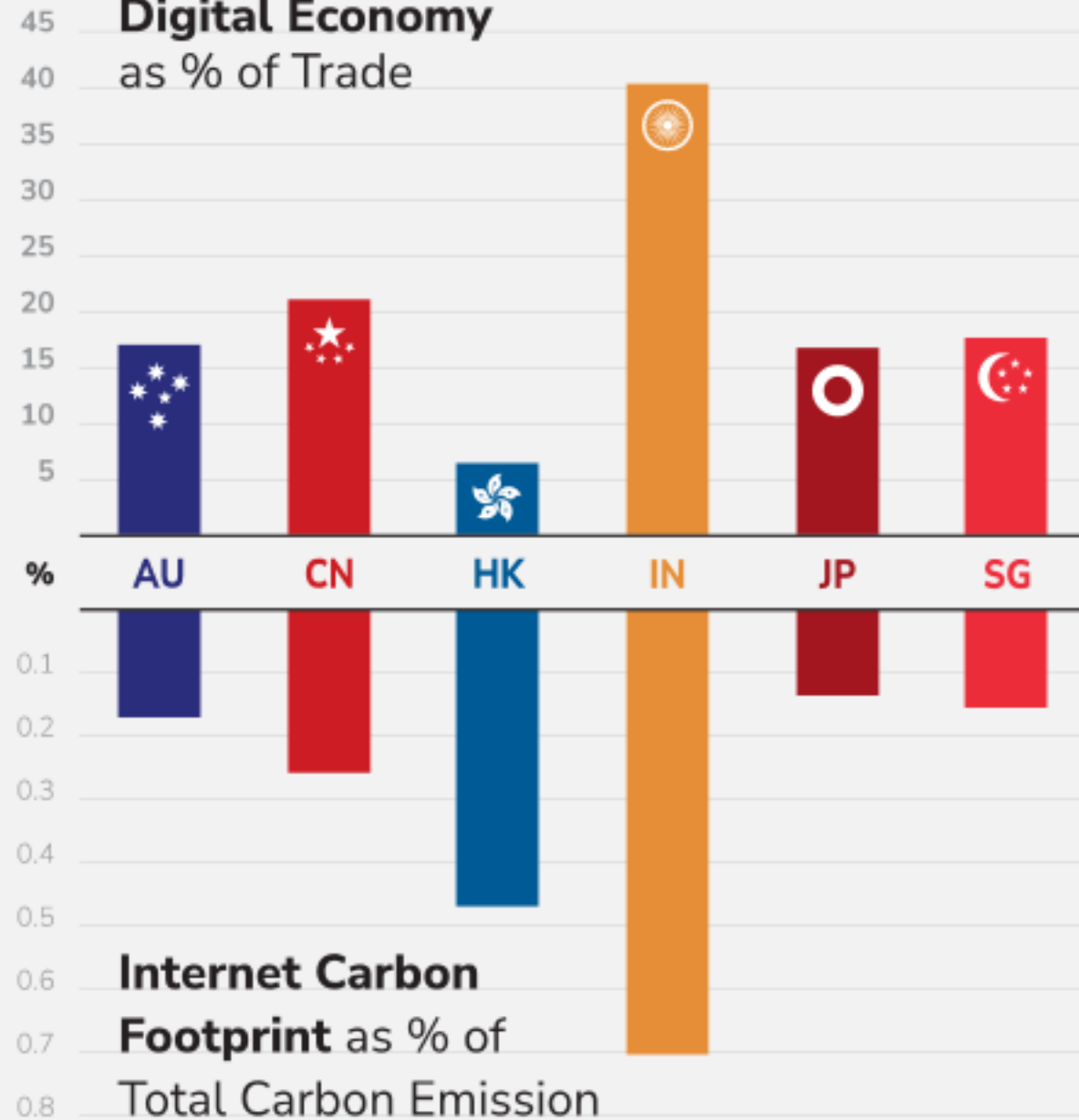
- Data Sources:
 - Local authorities & providers +

**we
are
social**

Hootsuite™



Digital Economy
as % of Trade



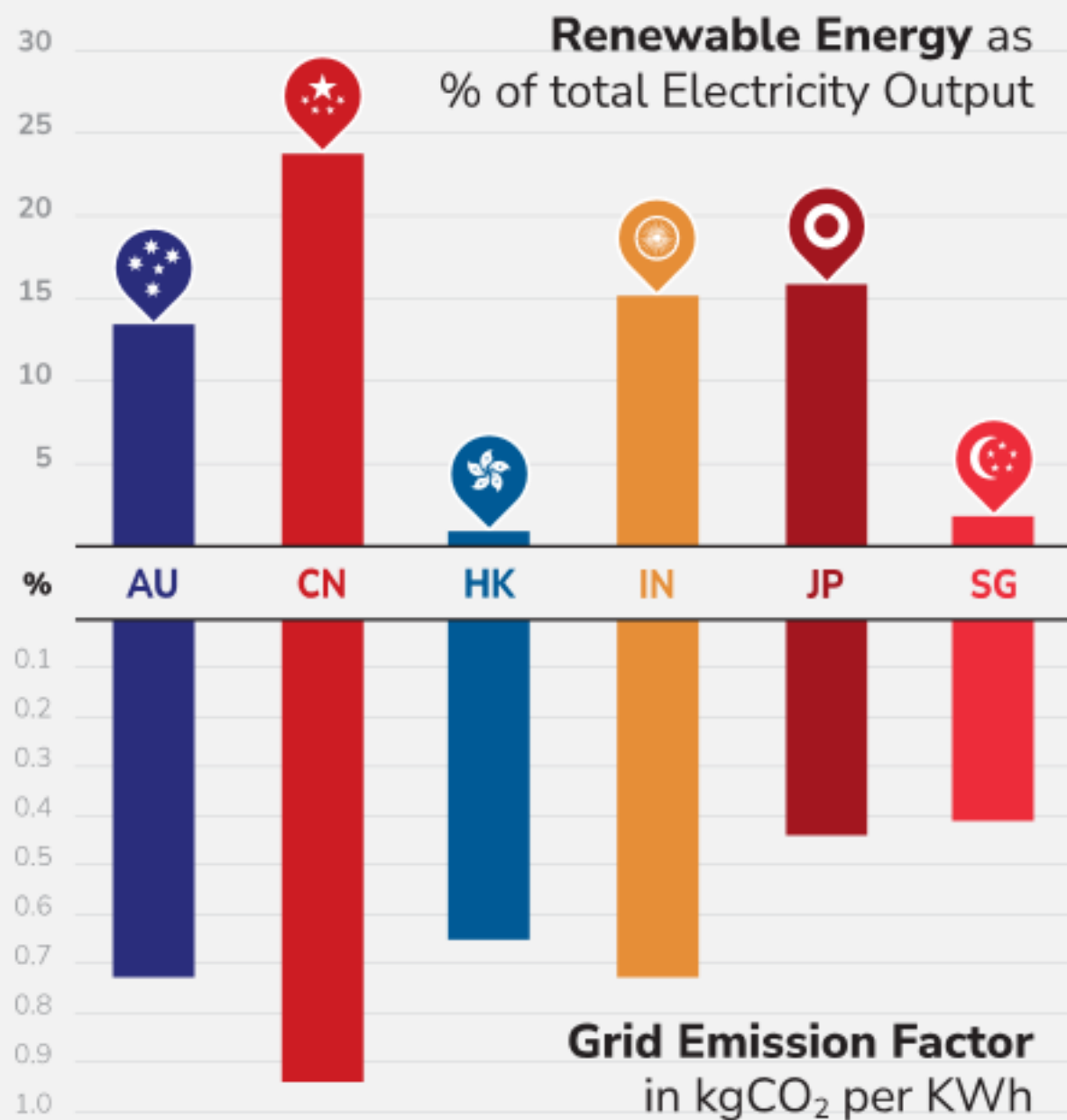
Energy

- Grid Emission Factor and Renewable Energy Source components

Grid Emission Factor (kgCO₂/KWh)

*Renewable electricity output
(% of total electricity output)*

- Data Sources
 - Local authorities & providers +



Efficiency

- Bandwidth capacity, speed & variance

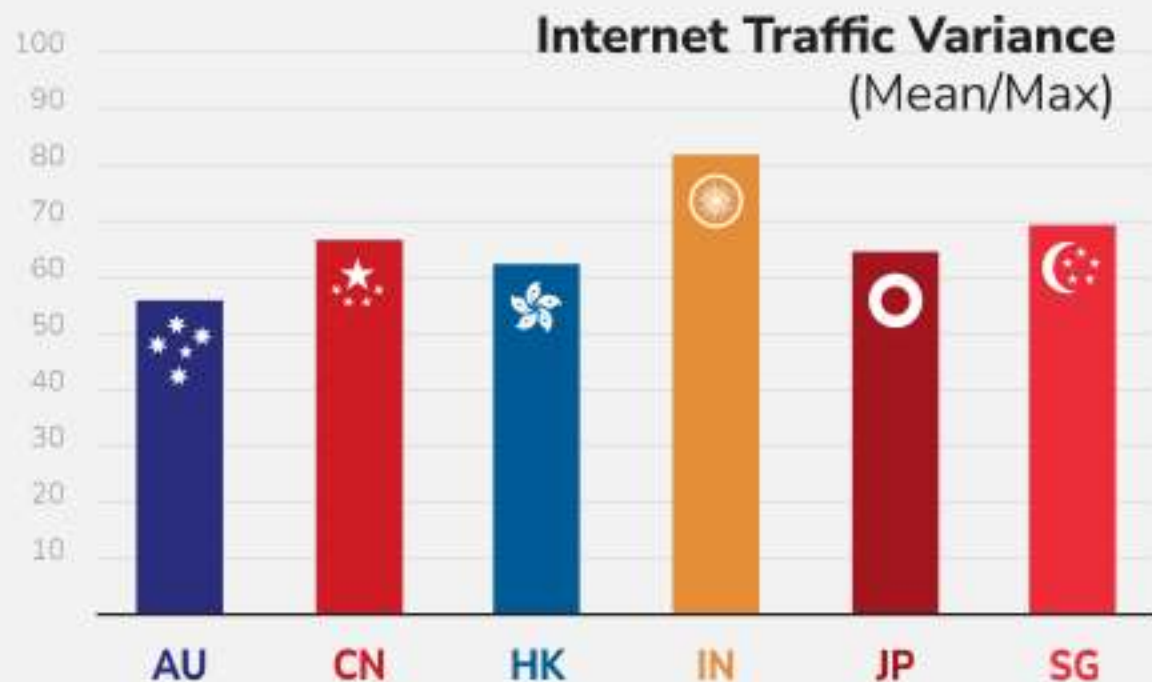
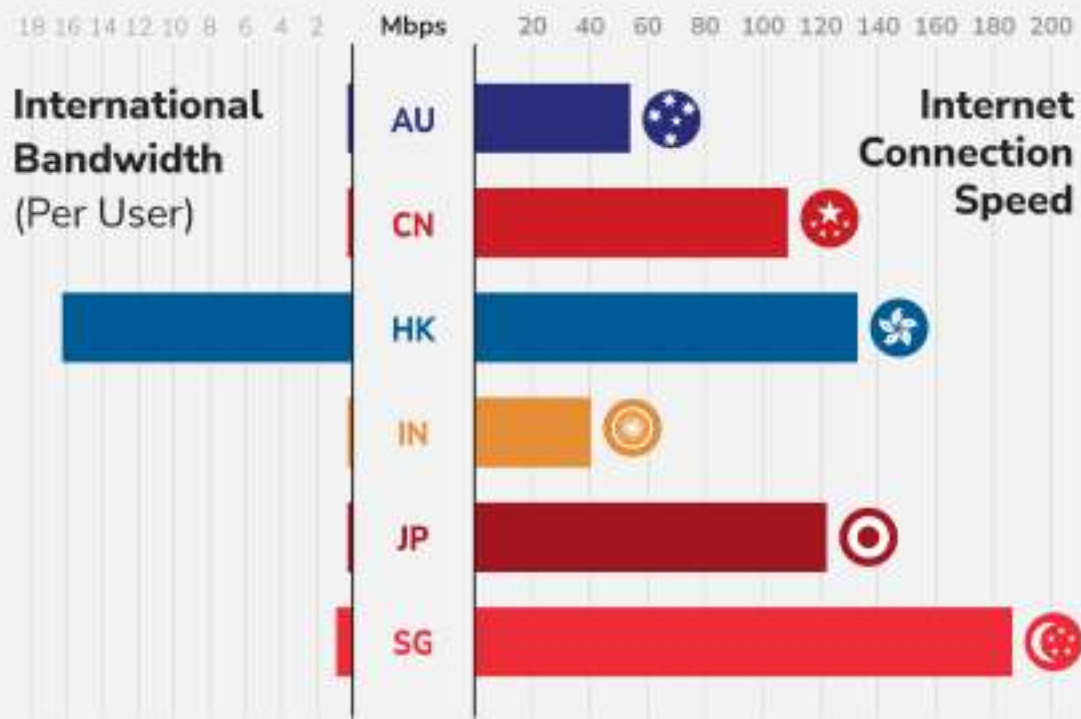
$$\frac{\text{Int'l Bandwidth (Mbps/user)}}{\text{Connectivity Speed (Mbps)}} \times \frac{\text{Traffic Volume}_{\text{MEAN}}}{\text{Traffic Volume}_{\text{MAX}}}$$

- Data Sources


- Local Internet Exchanges +



cable.co.uk



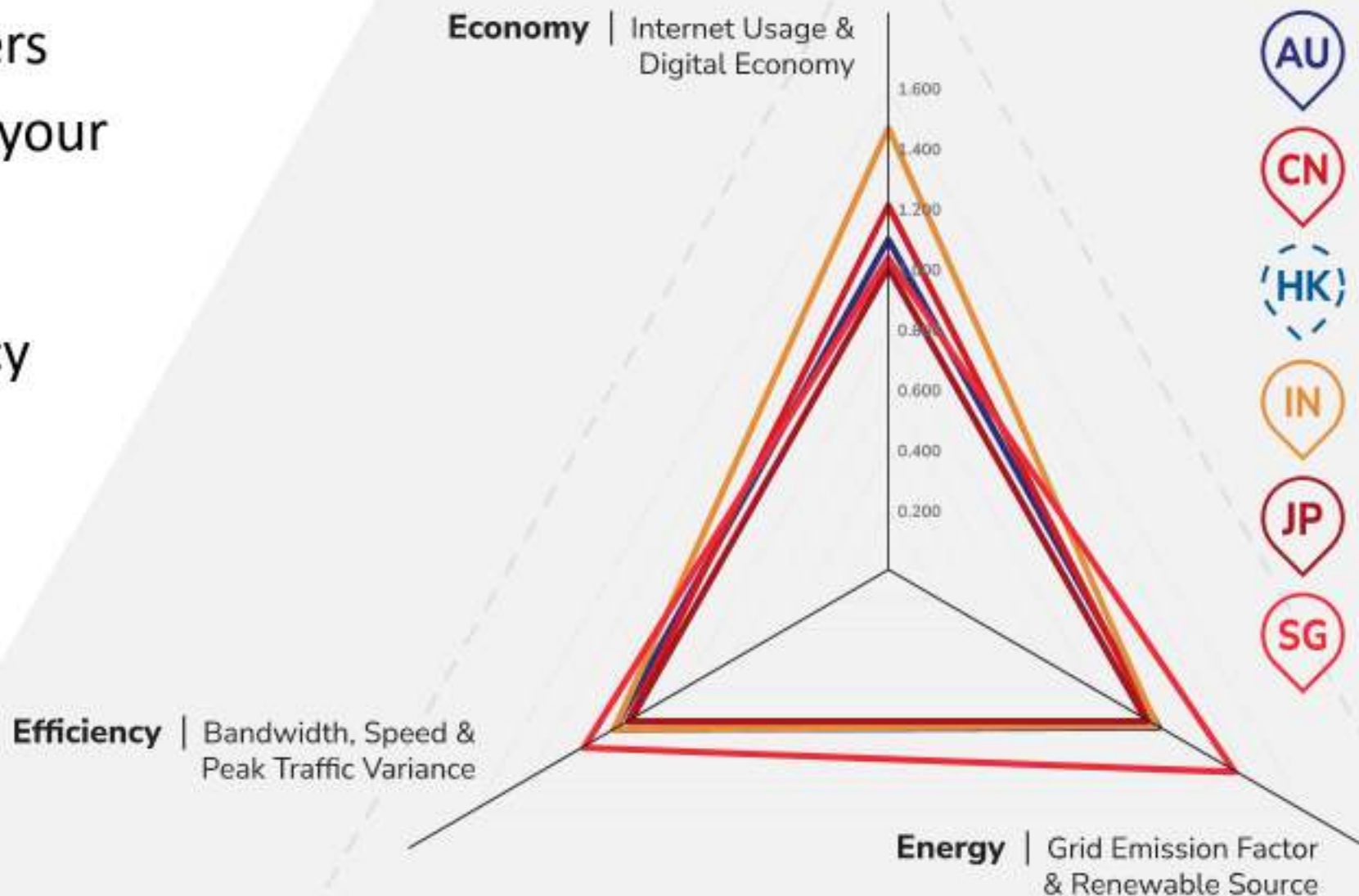
Eco-Internet Index (EII) Pilot Study Scores

	Economy		Energy		Efficiency		Composite Index	
	<i>Normalized Score</i>	<i>Rank</i>	<i>Normalized Score</i>	<i>Rank</i>	<i>Normalized Score</i>	<i>Rank</i>	<i>Composite Score</i>	<i>Rank</i>
	1.094	3	1.045	4	1.063	3	0.992	2
	1.209	4	1.020	2	1.010	2	1.012	3
	5.000	6	5.000	6	5.000	6	21.773	6
	1.466	5	1.034	3	1.066	4	1.214	4
	1.000	1	1.000	1	1.000	1	0.871	1
	1.037	2	1.341	5	1.181	5	1.219	5



Core Narratives

- Carbon conscious users
- The grid that powers your Internet
- The digital economy advantage & efficiency
- **Do more, waste less**





EcoInternet_Index

#DoMore #WasteLess

<https://ecointernet.asia>



EcoInternet Pilot Study Report 2021

The COVID-19 pandemic unequivocally demonstrated that the Internet is and will likely continue to be the core and

2022-2023: Expanding across Asia Pacific

- 15-20 Economies
- Refinement of methodology
- Connecting with Stakeholders



www.asia



HEINRICH
BÖLL
STIFTUNG



www.asia

Every .Asia Domain
Contributes to Internet
Development in Asia

Thank You! | info@dot.asia



www.asia

Asian #GenerAsian



A decorative header featuring a repeating pattern of green triangles and diamonds in various shades of green.

Update on the Switch! Gender and Diversity project

Mia Perez – Switch! National Coordinator for the Philippines

Switch! – diversity in the Internet Industry



145 women and **16** gender diverse professionals receiving professional development



Covering **Cambodia, Laos, Thailand, Timor Leste, The Philippines** and **Viet Nam**



166 training providers, **1480** enrollments, **416** courses complete and certifications achieved



124 participants sharing knowledge and expertise, including **14** technical research projects in progress



6 FtF national events + **6** delegates APNIC54 + **27** delegates APRICOT 2023/APNIC55

Switch! – diversity in the Internet Industry



Certifications for network operations, cybersecurity achieved, and professional development



60 participants received mentoring support



124 participants reporting increased activity around networking and visibility of their professional contributions



27 participants received support to attend APRICOT 2023 / APNIC 55 across workshops, hackathon and conference

Switch! - National Events



Networking events were organized in **Cambodia, Laos, Thailand, Timor Leste, The Philippines** and **Viet Nam** and were attended by 137 participants out of 203 Switch! and Switch SEA participants from 2021-2023

Switch! - participants research outcomes

- 2 published papers
- 12 ongoing



Switch! - Participation in technical community events



Women: Thailand Cyber Top Talent 2022



Switch! at SOIAsia



KHNOC



Viet Nam Internet Day

Stay tuned for more news!



<https://apnic.foundation>



@ApnicFoundation



APNICFoundation



apnic-foundation



<https://bit.ly/3A8qDJD>



<https://isif.asia>



@ISIF_Asia



ISIF.Asia

Questions?
Let's discuss!