# Universal Acceptance –
# Getting ready for the Expansion of the DNS

//*.*/

Universal Acceptance

Local businesses are known in their local language names

.Future…
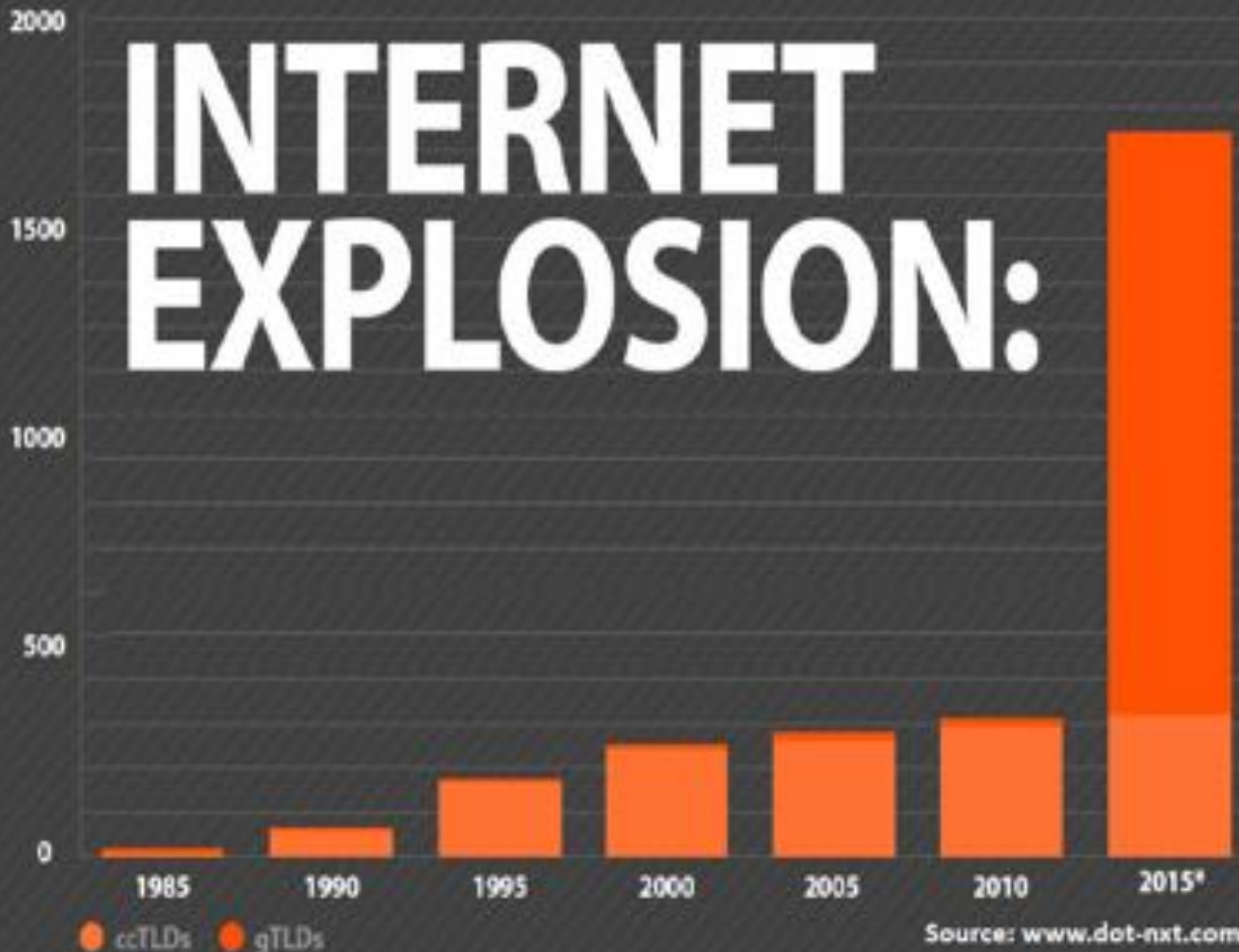
書籍 商标 机构 セール 通販 游戏 谷歌

政务 在线 موقع 娱乐 公益 中文网 一号店 亚马逊

संगठन ファッション 商城 كاثوليك москва 飞利浦

католик كتب 佛山 рус 點看 嘉里大酒店 网址 グーグル

ストア 盛贸饭店 中信 企业 家電 淡马锡

健康 大拿 كوم みんな онлайн 商店 香港電訊 همراه 食品 天主教

慈善 招聘 信息 手机 بازار 닷컴 ابوظبي 餐厅 дети

орг عرب 网店 盛貿飯店 微博 香格里拉 موزايك 诺基亚

购物 شبكة 工行 काम vermögensberater 手表 ポイント 政府

移动 八卦 اتصالات คอม 深圳 موبايلي 新闻 العليان vermögensberatung

大众汽车 联通 닷넷 网络 欧莱雅 сайт 普利司通

電訊盈科 网站 世界 广东 点看 नेट 通用电气公司

クラウド 集团 ком 时尚 公司 삼성 嘉里 アマゾン

كويت 广州 コム ارامكو 我爱你 珠宝

机构体制

# The Reality

# Definition

*"**Universal Acceptance** (UA) ensures that all **domain names** and **email addresses** can be used by all Internet-enabled applications, **devices** and **systems**."*

# Universal Acceptance Steering Group

# Who is involved…

# How to get
# Universal Acceptance ready?

# What Does "Universal Acceptance" Mean?

**ACCEPT**

**VALIDATE**

**STORE**

**PROCESS**

**DISPLAY**

Software and online services support Universal Acceptance when they offer the capabilities listed above for all domains and email names.

Universal Acceptance (UA) is the state where all valid domain names and email addresses are accepted, validated, stored, processed and displayed correctly and consistently by all Internet-enabled applications, devices and systems. Due to the rapidly changing domain name landscape, many systems do not recognize or appropriately process new domain names, primarily because they may be more than three characters in length or in a non-ASCII format. The same is true for email addresses that incorporate these new extensions.

The Universal Acceptance Steering Group (UASG), established by Internet Corporation for Assigned Names and Numbers (ICANN), is a community-led, industry-wide initiative working on creating awareness and identifying and resolving problems associated with the universal acceptance of domain names. The purpose of these efforts is to help ensure a consistent and positive experience for Internet users globally.

For more information on the UASG and recent developments, visit: https://goo.gl/k8Byax.

//*.*/ Universal Acceptance

Note that accept, validate and process are treated as distinct in this document. In actual practice these capabilities may overlap.

# UASG Activities

**Review**    Popular Websites, Dev Frameworks, Browsers, OS

**Build**    Use Cases, Test Environments, EAI Community

**Outreach**    Live Workshops, Panel Discussions, Presentations

**Writing**    Knowledge Databases, Whitepapers, Quick Guides

# Why should you care?

Internet of Things (IoT)

tv.jiro.box
テレビ.次郎.世界

fridge.jiro.box
家電.次郎.世界

sink.jiro.asia
厨房.次郎.世界

oven.jiro.asia
オーブン.次郎.世界

Internet of Names

# A smart city is an open city

- Open data
- Open standards
- Open infrastructure
- Open culture
- Open for everyone

# SUSTAINABLE DEVELOPMENT GOALS

## 17 GOALS TO TRANSFORM OUR WORLD

**1** NO POVERTY

**2** ZERO HUNGER

**3** GOOD HEALTH AND WELL-BEING

**4** QUALITY EDUCATION

**5** GENDER EQUALITY

**6** CLEAN WATER AND SANITATION

**7** AFFORDABLE AND CLEAN ENERGY

**8** DECENT WORK AND ECONOMIC GROWTH

**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE

**10** REDUCED INEQUALITIES

**11** SUSTAINABLE CITIES AND COMMUNITIES

**12** RESPONSIBLE CONSUMPTION AND PRODUCTION

**13** CLIMATE ACTION
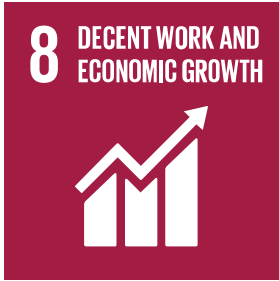
**14** LIFE BELOW WATER

**15** LIFE ON LAND

**16** PEACE AND JUSTICE STRONG INSTITUTIONS

**17** PARTNERSHIPS FOR THE GOALS

**THE GLOBAL GOALS**
For Sustainable Development

# Infrastructure Development



- 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labour-intensive sectors

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all

- 9.a Facilitate sustainable and resilient infrastructure development in developing countries through enhanced financial, technological and technical support to African countries, least developed countries, landlocked developing countries and small island developing States

- 9.b Support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities

- 9.c Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020

- 11.a Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

- 12.6 Encourage companies, especially large and transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle

- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities

- 12.a Support developing countries to strengthen their scientific and technological capacity to move towards more sustainable patterns of consumption and production

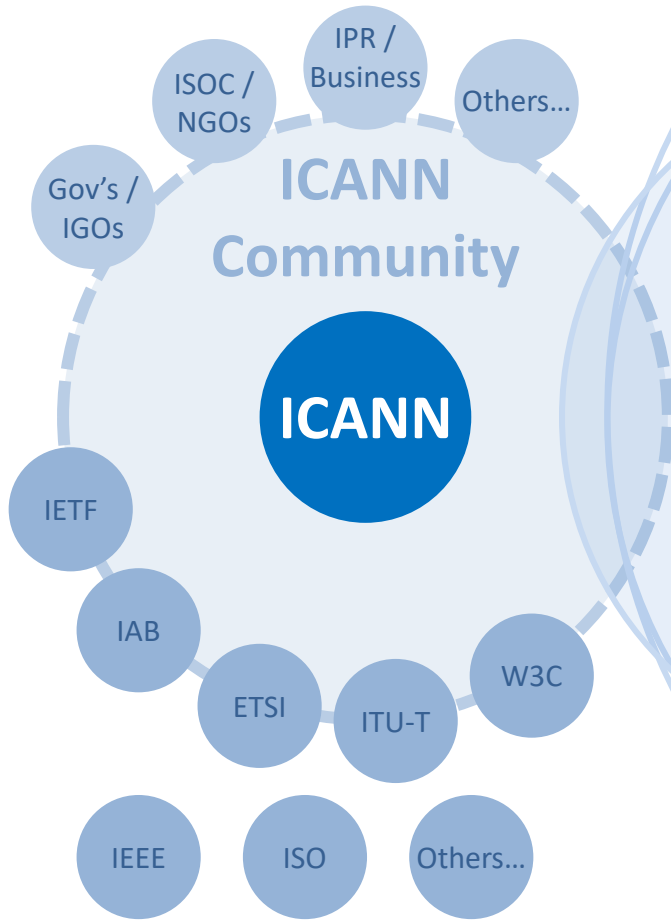# Cultural Diversity, Heritage, Social & Environmental Development
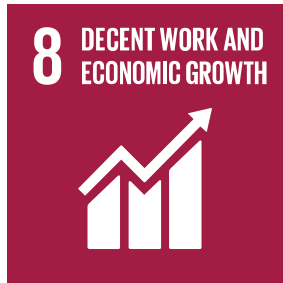


- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development

- 8.9 By 2030, devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products

- 11.4 Strengthen efforts to protect and safeguard the world's cultural and natural heritage

- 12.b Develop and implement tools to monitor sustainable development impacts for sustainable tourism that creates jobs and promotes local culture and products

- 6.b Support and strengthen the participation of local communities in improving water and sanitation management

- 13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities

- 15.c Enhance global support for efforts to combat poaching and trafficking of protected species, including by increasing the capacity of local communities to pursue sustainable livelihood opportunities

Internet Community…

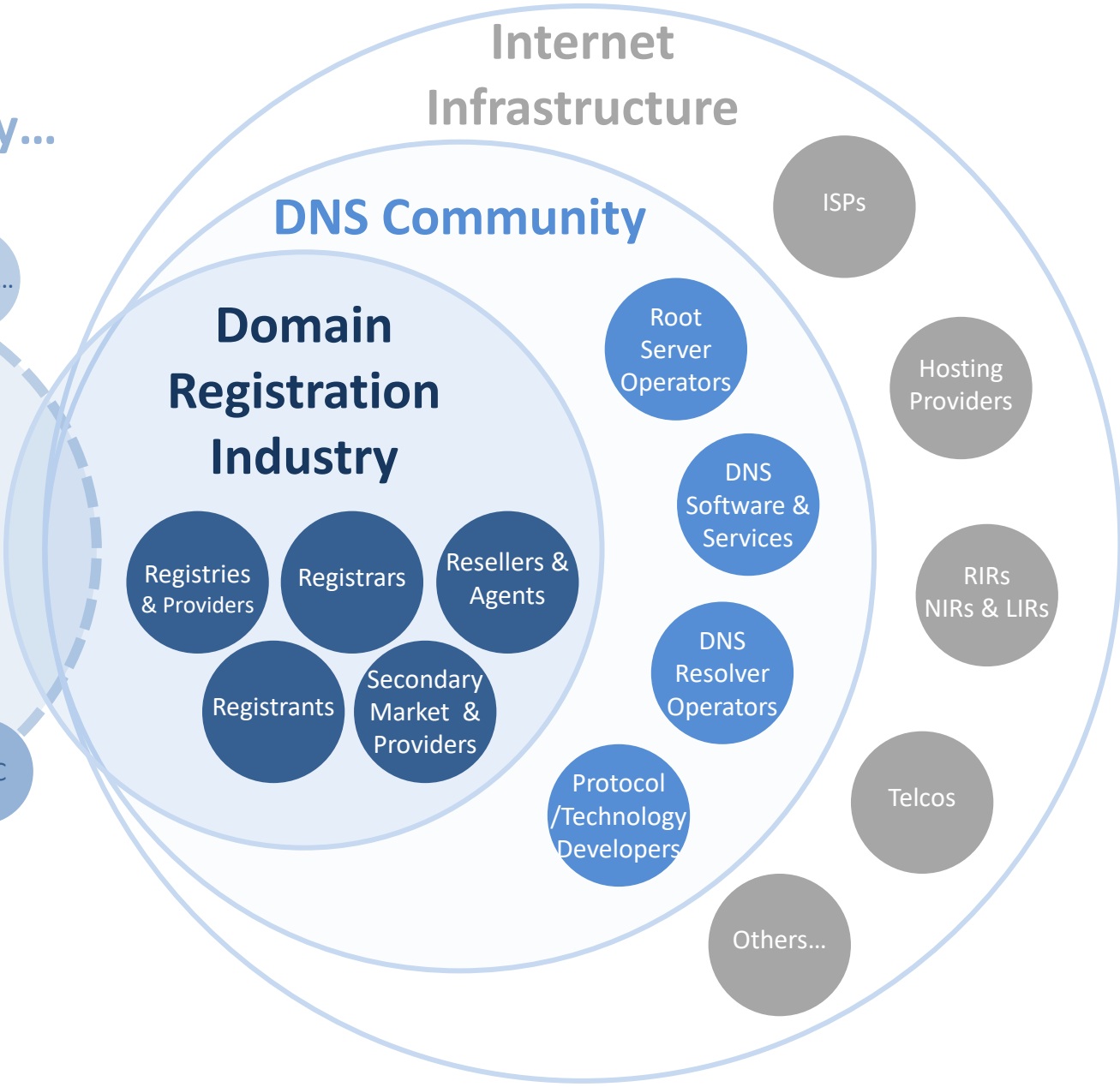Internet Infrastructure

Standards / Policy Coordination …

ICANN Community

ICANN

DNS Community

Domain Registration Industry

IPR / Business

ISOC / NGOs

Others…

Gov's / IGOs

IETF

IAB

ETSI

ITU-T

W3C

IEEE

ISO

Others…

Registries & Providers

Registrars

Resellers & Agents

Registrants

Secondary Market & Providers

Root Server Operators

DNS Software & Services

DNS Resolver Operators

Protocol /Technology Developers

ISPs

Hosting Providers

RIRs NIRs & LIRs

Telcos

Others…

ICANN is the global policy coordination body for the Internet's root DNS. All generic TLD (gTLD) Registries and Registrars have an agreement with ICANN. Some Country Code TLD (ccTLD) Registries also have an agreement with ICANN, some ccTLDs are governed by local authorities. All TLDs maintain a relationship with IANA who administers the root DNS.

## RESOURCE

*The Root DNS as a shared global resource. The Root DNS is a master list of all Top-Level Domains (TLD).*

**Root DNS**

## PRODUCER

*Registries operate as producers (or manufacturers) in the Domain Registration Industry. Registries operate under an agreement with ICANN and/or local authorities, and are responsible for maintaining the authoritative list of domain names (e.g. example.tld) within the TLD they operate.*

**ICANN**

**IANA**

**Registry**

**Backend / Tech Providers**

**Front-End / Consultants**

## DISTRIBUTOR

*Registrars act as distributors in the Domain Registration Industry. Some Registrars operate as retailers, some operate as wholesalers and offer domain registration services through resellers and agents. Registrars operate under an agreement with ICANN and/or local authorities as well as with the Registry. Resellers/Agents have agreements with Registrars.*

**ccTLDs**
(local gov / authority)

**Registrar**

**Resellers**

**Agents**

## CONSUMER

*Registrants are consumers in the Domain Registration Industry. Registrants often provide content and services to Internet users through their registered domain names. Some registrants offer their domain names for sale in the secondary market. Registrants have an agreement with the registrar or reseller/agent (including if they acquired the domain in the secondary market).*

**Registrant**

**Secondary Market / Trading Domain Names**

## SERVICE PROVIDER

*Hosting and Internet Service Providers maintain the content and services offered by Registrants. While they are not in the Domain Registration Industries, some registrars also provide hosting services.*

**Hosting (DNS, Web, Email etc.) & ISP**

## END USER

*The Internet User accesses information (e.g. website) & services (e.g. email) online through their ISP to Internet hosts utilizing domain names (e.g. www.example.tld).*

**Internet User**

**Domain Registration Industry**

**DNS Community / Internet Infrastructure**

# Universal Acceptance ready

* Accept, Support, Use and Show Unicode.

* Store Information in UTF-8.

* Accept Strings up to 256 characters.

* Validate as little as possible.

    * Verify TLDs against authoritative table.

    * Query domain name against DNS.

# Universal Acceptance ready

* When developing app / service, or operating a registry, consider languages supported.

* Perform code reviews.

* Check code points that were not defined when application / service was created.

# Universal Acceptance ready

* Consider mixed-script addresses become more common.

* Convert non-Unicode to Unicode before display.

* Use Unicode IDNA Compatibility Processing to match user expectations.

* End user should see "everyone.みんな" vs. "everyone.xn--q9jyb4c."

Encountering UA issues?

uasg.tech/global-support-centre

# Further information

* Visit uasg.tech
* Visit bit.ly/icannUA
* Visit github.com/icann



* Get your Universal Acceptance Quick Guide!

How many APPs would a user download? Really...

# 大閘蟹.asia

**NETMISSION.asia**

Youth engagement program on Internet Governance & Digital Inclusion. Ambassadors selected from Universities are trained on global Internet issues and tasked with implementing their own projects. Alumni projects have touched Primary & Secondary School Students and Beyond.

# Youth Mobility Index (YMI.Asia) Methodology

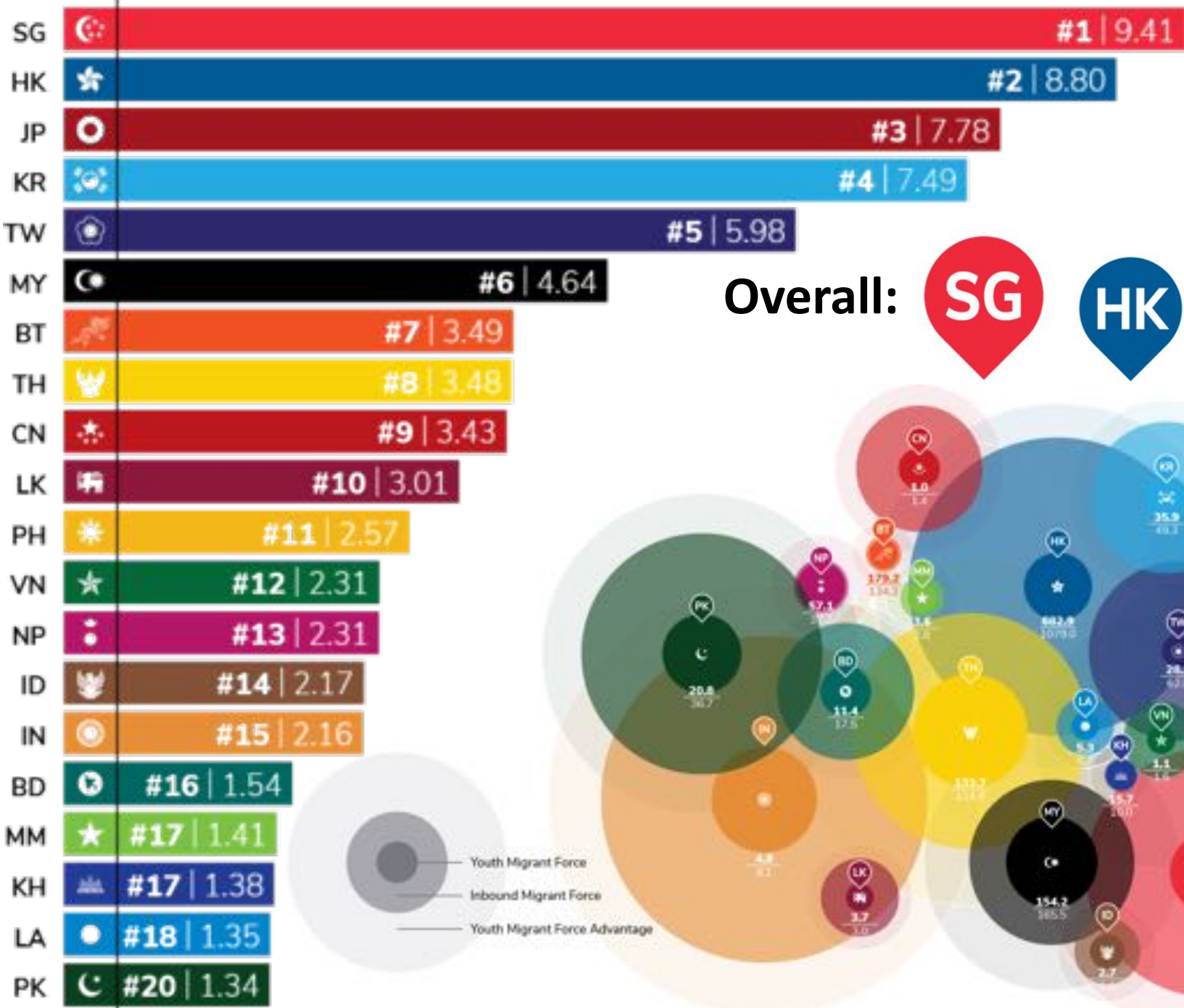| | Outbound Mobility | Inbound Mobility | Startup Mobility | Sustain-ability | Internet Factor |
|---|---|---|---|---|---|
| Education | | | | | |
| Employment | | | | | |
| Entrepreneurship | | | | | |

**3** Core Sectors
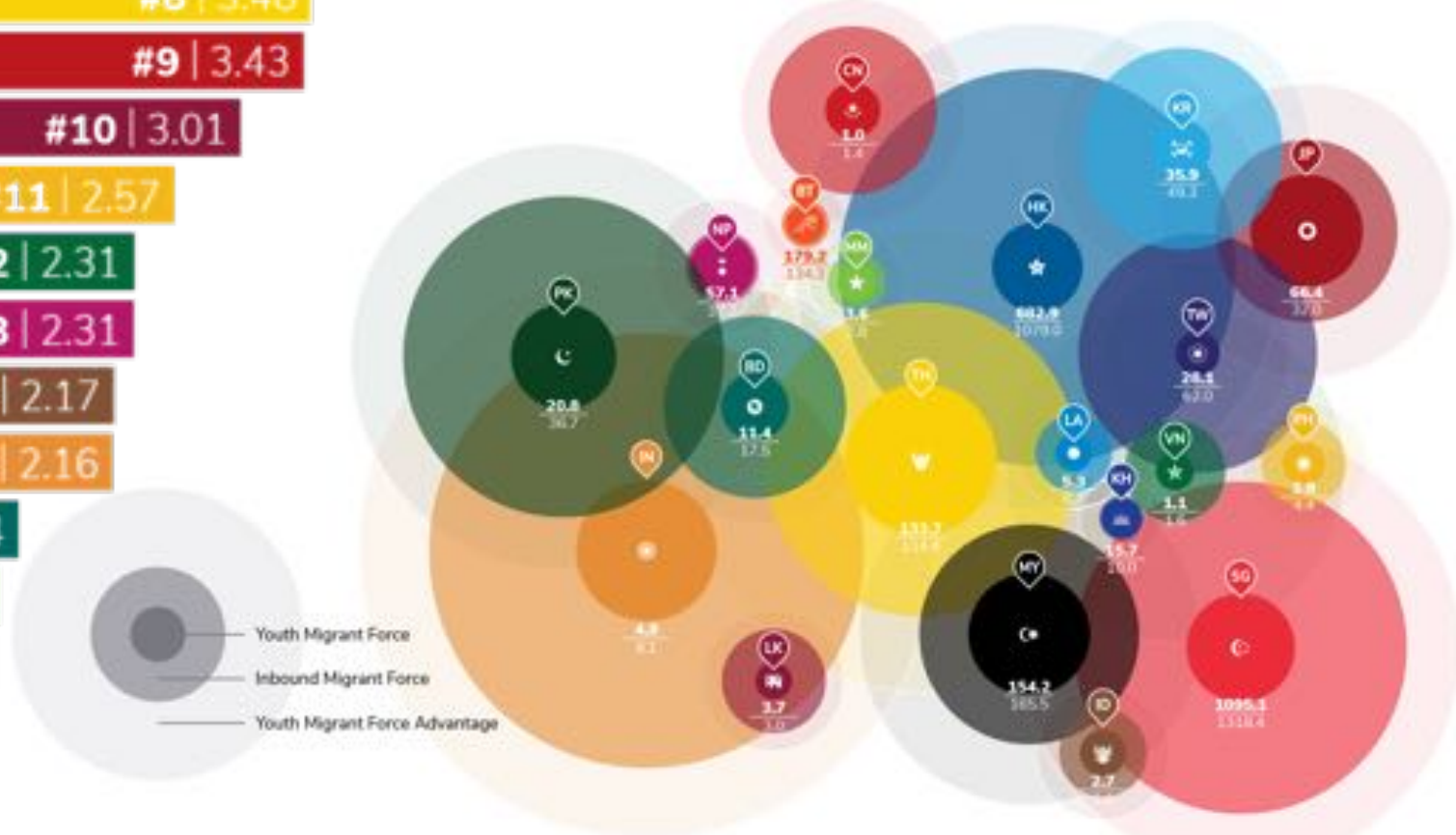
**5** Mobility Vectors

**15** Components

**60** Indicator Compounds

**3 Core Sectors**
**× 5 Mobility Vectors**
**= 15 Components**
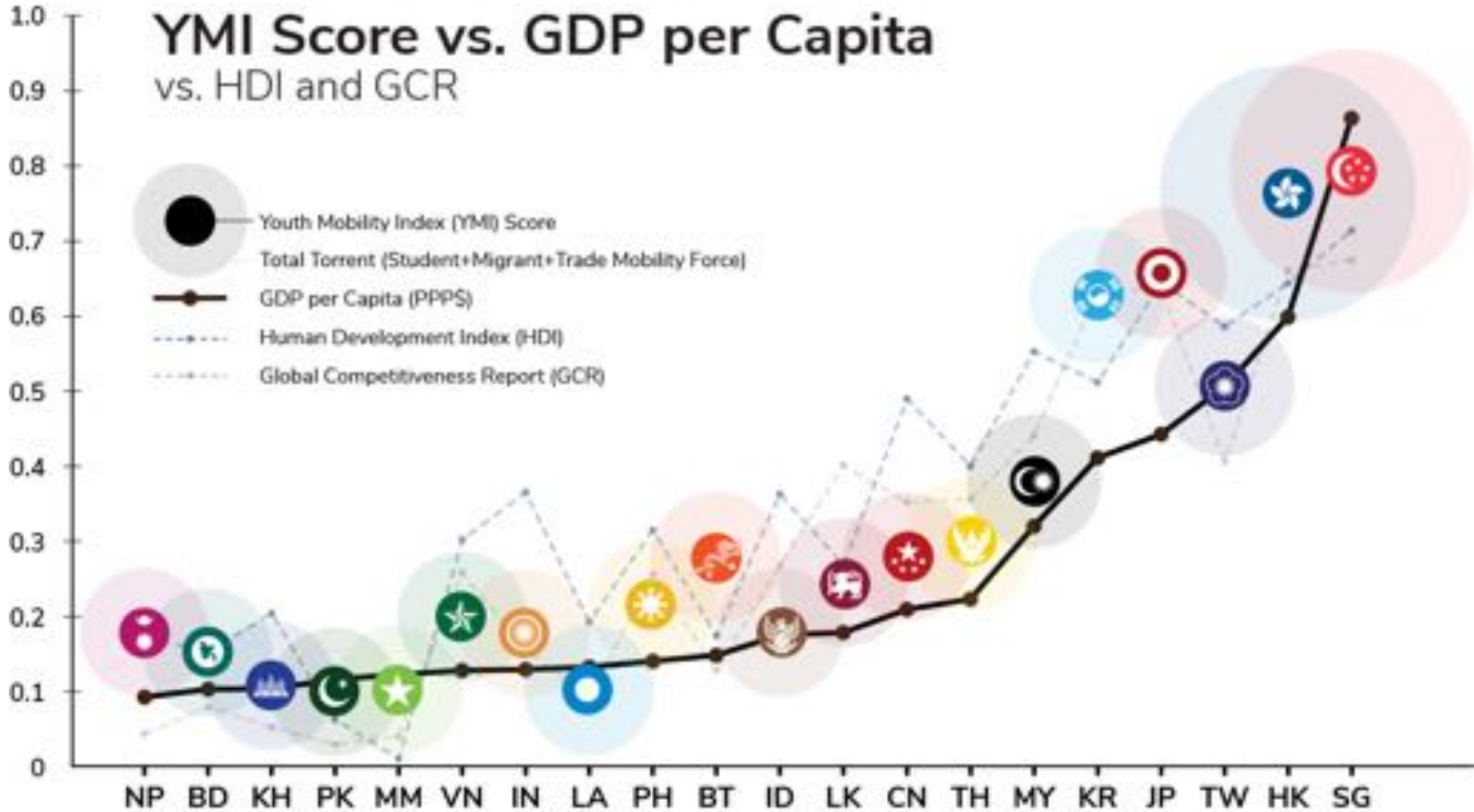**× 4 Dimensions Each**
**= 60 Indicator Compounds**

Each Indicator Compound Combines 2 or more Socio-Economic Indicators (e.g. GDP, No. Outbound Migrants, Internet Users, etc.). A total of 216 Indicators are used in the YMI 2018 calculations.

YOUTH MOBILITY
INDEX ASIA

YMI.asia

# YMI Score vs. GDP per Capita
## vs. HDI and GCR

Youth Mobility Index (YMI) Score

Total Torrent (Student+Migrant+Trade Mobility Force)

GDP per Capita (PPP$)

Human Development Index (HDI)

Global Competitiveness Report (GCR)

NP  BD  KH  PK  MM  VN  IN  LA  PH  BT  ID  LK  CN  TH  MY  KR  JP  TW  HK  SG

# Digital Mobility 移動力
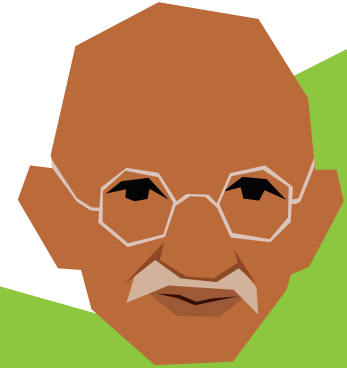
# Universal Acceptance:
# **Local Languages Global Standards**

2018.07.25 l APIGA l Gwangju

Edmon Chung

from.Asia / for.Asia

.asia
#RiseWithAsia

Every .Asia Domain Contributes to Internet Development in Asia