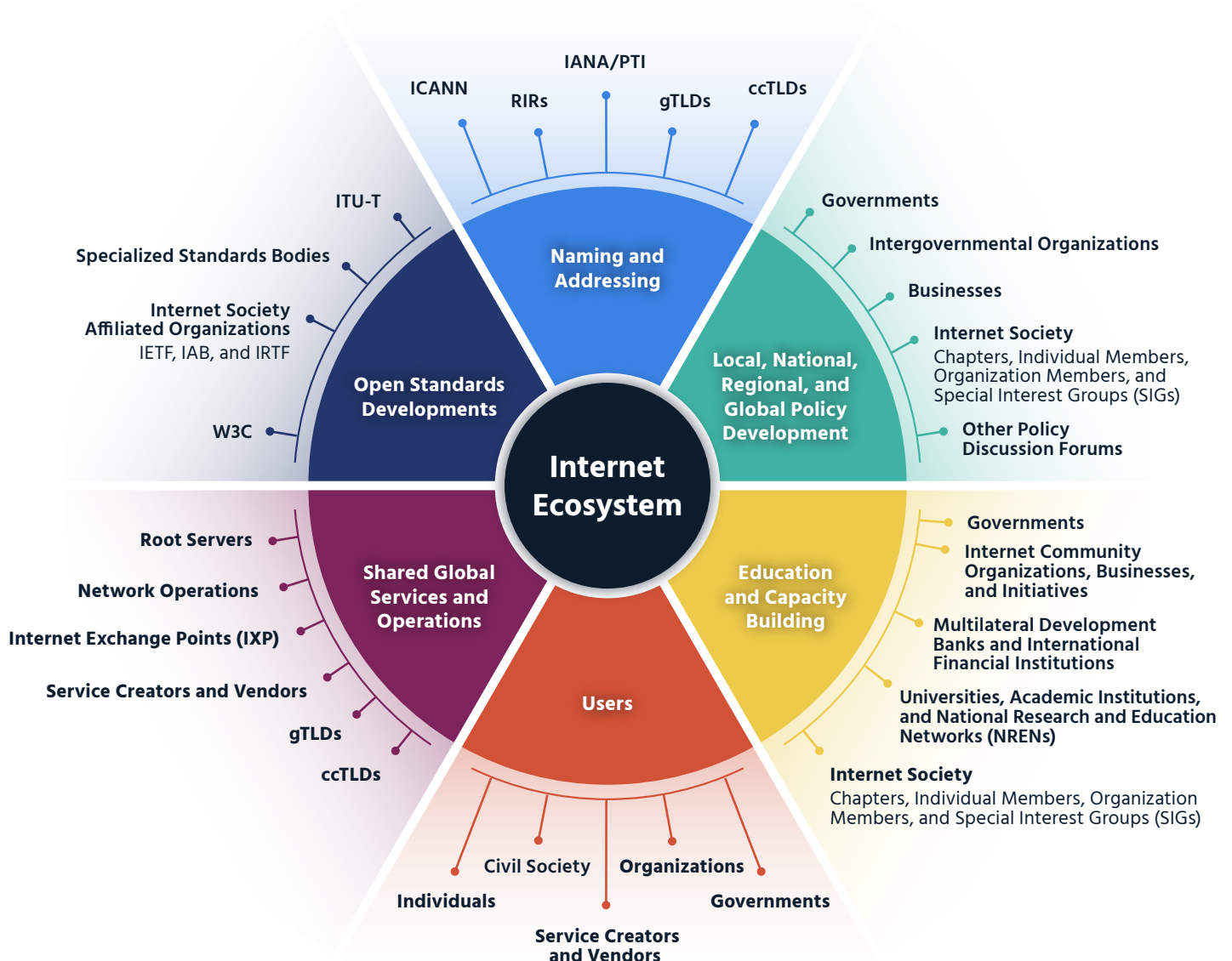


The Internet Ecosystem

The Internet is successful in large part due to its unique model: shared global ownership, open standards development, and freely accessible processes for technology and policy development.

The Internet has enjoyed unprecedented success thanks to its open, transparent, and collaborative model. The model relies on processes that are local, bottom-up and accessible to users around the world.

Learn more at internetsociety.org



Note: The following definitions are not an exhaustive list but provide a general understanding of key concepts.

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Civil Society is a highly diverse community of organizations established on a not-for-profit basis that serve individual, group and community interests. Internet civil society groups include, but are not limited to, grassroots communities, media, youth, gender, Indigenous people, Thinktanks, education and research groups, or other groups.

Country-Code Top-Level Domains (ccTLDs) are operated according to the policies of the country or territory involved.

www.iana.org/domains/root/db

Generic Top-Level Domains (gTLDs) registries operate sponsored and unsponsored gTLDs according to ICANN policies.

www.iana.org/domains/root/db

Governments at national, state, and local levels, and their regulators, have roles in setting policies related to the Internet, including infrastructure development and access, digitalization of the economy and society, cybersecurity, and data and privacy protection.

Infrastructure Providers invest in and build the physical Internet infrastructure that allows network operators to provide users access to the Internet. They include companies, organizations, and consortiums that build and operate submarine cables, terrestrial networks, satellite networks, cellular towers, Internet exchange points (IXPs), content delivery networks (CDNs), and data centers.

Intergovernmental Organizations (IGOs) include, but are not limited to, the United Nations; regional bodies like the African Union (AU), Asia-Pacific Telecommunity (APT), Caribbean Telecommunications Union (CTU), European Union (EU), and Organization of American States (OAS); and policy forums like the Asia-Pacific Economic Cooperation (APEC) and Organisation for Economic

Co-operation, and Development (OECD). Respective member governments coordinate policies related to telecommunication and the Internet through these organizations.

International Telecommunication Union (ITU)

is the United Nations specialized agency for telecommunications. The ITU allocates global radio spectrum and satellite orbits (ITU-R), develops the technical standards that ensure that telecommunication networks and technologies seamlessly interconnect (ITU-T), and strives to improve access to ICTs to underserved communities worldwide (ITU-D). www.itu.int

Internet Architecture Board (IAB) is chartered as a committee of the Internet Engineering Task Force (IETF) and as an advisory body of the Internet Society. Its responsibilities include architectural oversight of IETF activities, Internet standards process oversight and appeal, appointment of the Request for Comments (RFC) Editor, and management of IETF protocol parameter registries. www.iab.org

Internet Assigned Numbers Authority (IANA)

is responsible for the administrative functions concerning the domain name system (DNS) root, Internet protocol addressing, and other Internet protocol resources. These functions are carried out by Public Technical Identifiers (PTI), a subsidiary of the Internet Corporation for Assigned Names and Numbers (ICANN). www.iana.org

Internet Community Organizations and Initiatives

promote, deliver, and invest in Internet education and capacity building. Organizations include, but are not limited to, the Regional Internet Registries (RIRs), Internet Corporation for Assigned Names and Numbers (ICANN), Network Startup Resource Center (NSRC), Internet exchange points (IXPs), network operators, vendors, and technology



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companies. Initiatives include, but are not limited to, the EQUALS Digital Skills Fund and Mutually Agreed Norms for Routing Security (MANRS).

Internet Corporation for Assigned Names and Numbers (ICANN) is responsible for managing and overseeing the coordination of the Internet's domain name system (DNS) and its unique identifiers, such as Internet protocol (IP) addresses. ICANN is a non-profit public benefit corporation with a global community of participants, and oversees the Internet Assigned Numbers Authority (IANA). www.icann.org

Internet Engineering Task Force (IETF) is an Internet standards body that engages a global community of network designers, operators, vendors, and researchers to develop open standards through open processes. IETF adopts technical and organizational notes and specification about the Internet in the form of the RFC document series. The Internet Society supports IETF through a variety of programs and the establishment of the IETF LLC – the administrative entity that supports the IETF, Internet Architecture Board (IAB), and Internet Research Task Force (IRTF). www.ietf.org

Internet Exchange Points (IXPs) at regional and national levels provide physical infrastructure that allows network operators to exchange Internet traffic between their networks through mutual peering agreements. IXPs improve network resilience, stability, efficiency, and quality.

Internet Governance Forum (IGF), convened by the United Nations Secretary-General in 2006, is a global multistakeholder forum for dialogue on Internet governance issues. IGF functions as a year-long process with annual meetings and intersessional activities. This process is coordinated by the Multistakeholder Advisory Group and the

IGF Secretariat. IGF has triggered a number of national, regional, and youth IGF initiatives. Their collective work and cooperation are facilitated by the IGF Secretariat. www.intgovforum.org

Internet Research Task Force (IRTF) promotes research relevant to the evolution of the future Internet by creating focused and long-term Research Groups working on topics related to Internet protocols, applications, architecture, and technology. IRTF complements the work of the Internet Engineering Task Force (IETF). www.irtf.org

Internet Society is a non-profit organization empowering people to keep the Internet a force for good: open, globally connected, secure, and trustworthy. Through members, chapters, special interest groups, and partners, they are the hub of the largest global network of people and organizations working to build the Internet for everyone. www.internetsociety.org

Multilateral Development Banks and International Financial Institutions provide funding and technical assistance to member states to promote access to and use of the Internet for socioeconomic development. This includes supporting Internet-related education and capacity building initiatives.

Network Operators are individuals and entities that manage the network infrastructure, which provides users access to the Internet. Regional and national Network Operator Groups (NOGs) provide collaboration and consultative opportunities for operators.

Other Policy Discussion Forums include, but are not limited to, the European Internet Forum (EIF) and World Economic Forum (WEF), as well as national consultative forums, and initiatives led by industry associations, and civil society.



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Public Technical Identifiers (PTI) began performing functions of the Internet Assigned Numbers Authority (IANA) in October 2016. PTI is responsible for the operational aspects of coordinating the Internet's unique Identifiers, including the domain name system (DNS) root and Internet protocol (IP) addressing; and maintains many of the codes and numbers used in Internet protocols in coordination with the Internet Engineering Task Force (IETF). pti.icann.org

Regional Internet Registries (RIRs) oversee the registration and allocation of Internet number resources within a particular region. Each RIR is a member of the Number Resource Organization (NRO), which acts as a coordinating body for the RIRs. The five RIRs are: African Network Information Centre (AFRINIC), Asia Pacific Network Information Centre (APNIC), American Registry for Internet Numbers (ARIN), Latin America and Caribbean Network Information Centre (LACNIC), and the Réseaux IP Européens Network Coordination Centre (RIPE NCC). www.nro.net

Root Servers reliably publish the content of one small file called a root zone file to the Internet. This file is at the apex of a hierarchical distributed database called the domain name system (DNS), which is used by almost all Internet applications to translate human-readable names like www.internetsociety.org into machine-readable names. The web, email, and other Internet services use the DNS. www.root-servers.org

Service Creators/Vendors provide software applications and platforms that enable the delivery of content and services on the Internet. They include, but are not limited to, mobile app development platforms, social media platforms, e-commerce and payment platforms, cloud service providers, and cybersecurity companies.

Specialized Standards Bodies focus on specialized standards; some play key roles in the Internet. These organizations include, but are not limited to, 3GPP, ETSI, Identity Commons, IEEE Standards Association, ISO ANSI, Liberty Alliance Project, OASIS, Open Source Communities, and W3C.

Universities, Academic Institutions, and National Research and Education Networks (NRENs) play a critical role in educating students, business executives, and policymakers about the Internet. They also prototype and demonstrate hardware and software solutions that benefit the Internet.

Users include people and organizations that use the Internet, or provide content and services to others on the Internet.

World Wide Web Consortium (W3C) is a global community where member organizations, a full-time staff, and the public work together to develop open standards for the web. www.w3.org

