ICANN Global Domains and Strategy (GDS) Role in the DNS Ecosystem

January 2025

ICANN

The Domain Name Industry Ecosystem

Domain Name Industry
- Registry Operators
- Registry Service Providers
- Registrars
- Resellers

ICT Sector
- Telecommunication Providers
- Internet, IT and Network Products and Services
- Web-based Apps, Services and Content
- Internet Service Providers

Internet Coordination Layer

GOV & INTERGOV ORGS

IAB
Internet Architecture Board

ICANN
Internet Corporation for Assigned Names and Numbers

IETF
Internet Engineering Task Force

IGF
Internet Governance

INOG
Internet Network Operators Group

IRTF
Internet Research Task Force

ISO
International Organization for Standardization

ISOC
Internet Society

RIRs
Regional Internet Registries

W3C
World Wide Web Consortium

ICANN's Mission

The mission of the Internet Corporation for Assigned Names and Numbers (ICANN) is to **ensure the stable and secure operation of the Internet's unique identifier systems**

1 Coordinates the allocation and assignment of names in the root zone of the Domain Name System

2 Coordinates the development and implementation of policies concerning the registration of second-level domain names in generic top-level domains (gTLDs)

3 Facilitates the coordination of the operation and evolution of the DNS root name server system
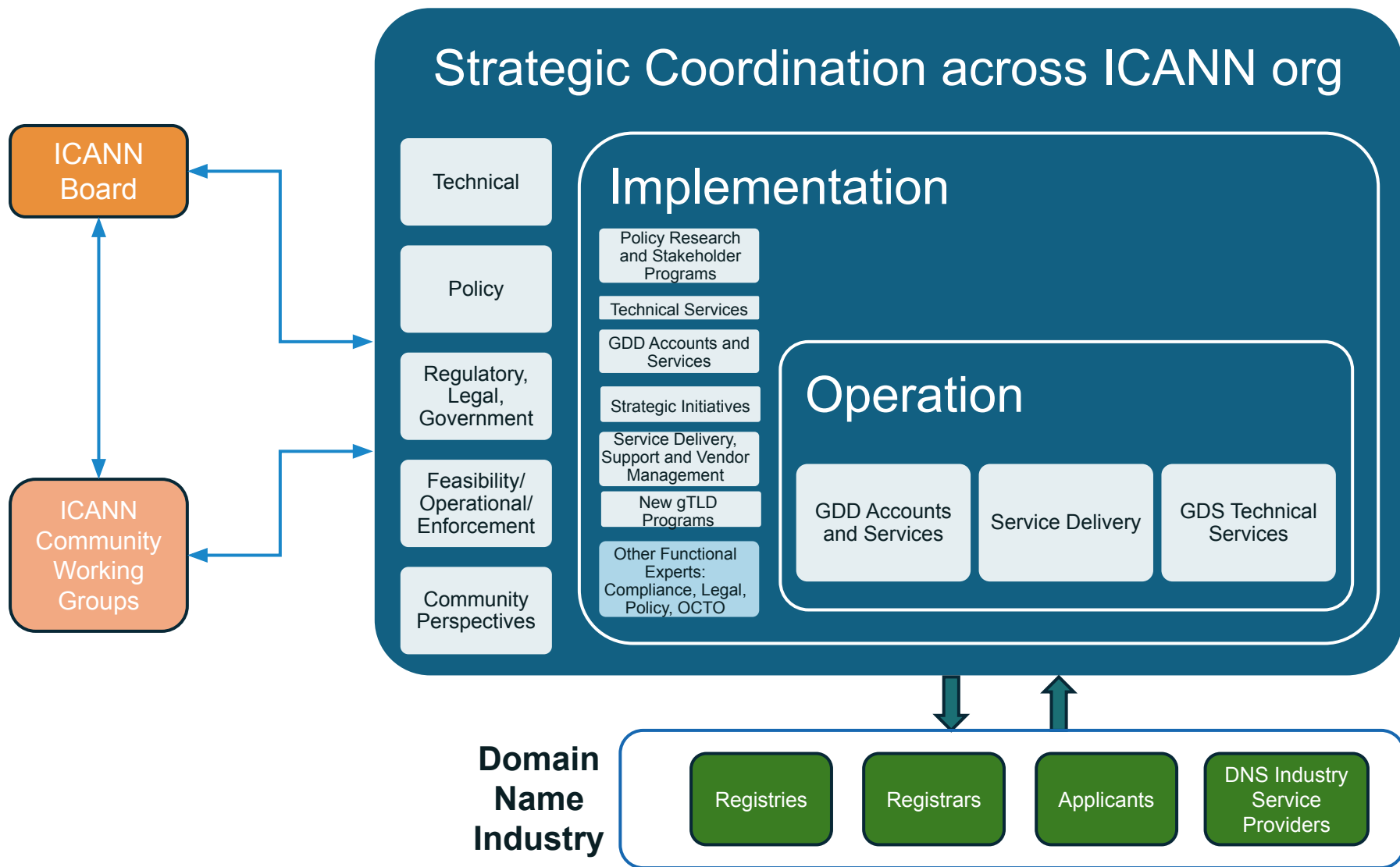
4 Coordinates the allocation and assignment at the top-most level of Internet Protocol numbers and Autonomous System numbers

5 Collaborates with other bodies as appropriate to provide registries needed for the functioning of the Internet as specified by Internet protocol standards development organizations

ICANN Global Domains and Strategy (GDS) Role
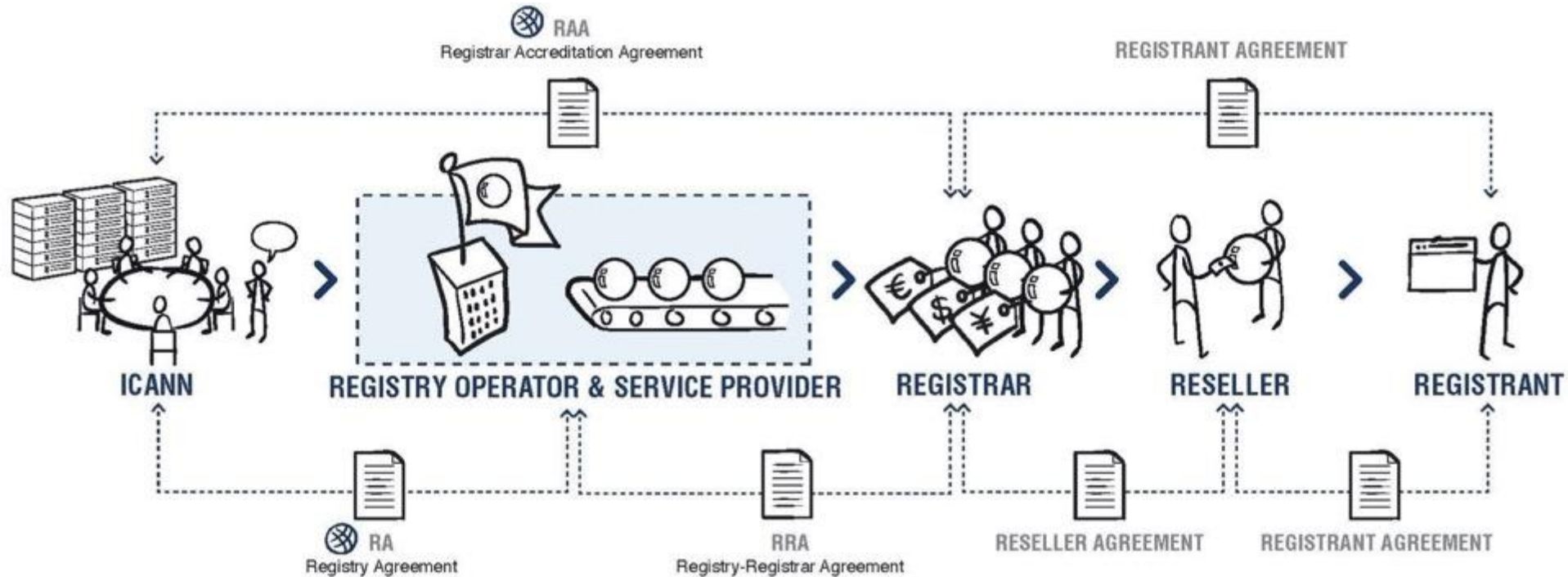
GDD Accounts and Services (GAS) Team

The GAS team is responsible for engaging and working with the contracted parties on behalf of ICANN. This team is tasked with helping the organization solve issues related to the work ICANN does with contracted parties on behalf of the Internet community.

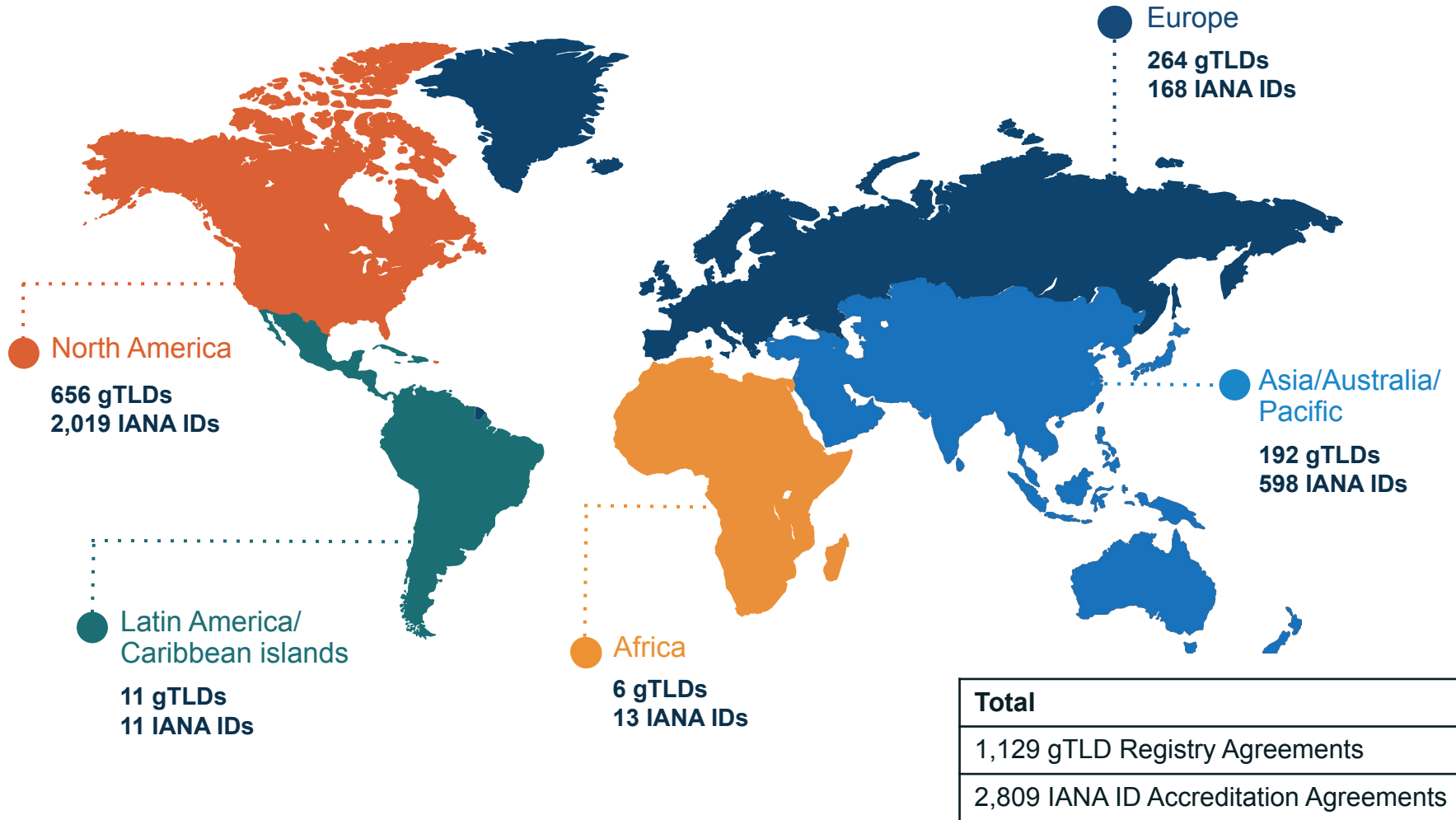The team defines requirements and implements solutions for

1. how ICANN operates services for contracted parties, and
2. the qualification standards for applicants to become gTLD registries and registrars.

The team provides market intelligence and analysis for ICANN, and supports the gTLD registries and registrars in fulfilling their contractual obligations.

Domain Name Industry Responsibilities

ICANN Contracted Party Global Distribution*

Europe

264 gTLDs
168 IANA IDs

North America

656 gTLDs
2,019 IANA IDs

**Asia/Australia/
Pacific**

192 gTLDs
598 IANA IDs

**Latin America/
Caribbean islands**

11 gTLDs
11 IANA IDs

Africa

6 gTLDs
13 IANA IDs

Total
1,129 gTLD Registry Agreements
2,809 IANA ID Accreditation Agreements

* Based on location of the public address provided by the gTLD registry operators and registrars as of July 31, 2024.

GAS Team: Key Areas of Focus

Serves the Internet community by being the **primary connection point for ICANN to the domain name industry.**

- ◉ Responsible for managing ICANN's relationships and contracts with the domain name industry. Liaise to reduce friction.

- ◉ Leads the evolution of the contracts to better serve the Internet community.

- ◉ Support Consensus Policy analysis and implementation by identifying potential impacts on existing policies, procedures and services.

- ◉ Develops solutions to enable ICANN manage gTLD registries and registrars' contracts effectively, equitably, and efficiently.

- ◉ Leads projects and initiatives that assess the domain name industry ecosystem, including ICANN's funding forecast. Mitigates ICANN's technical, financial, and reputational risks.

- ◉ Leads ICANN's org-wide DNS Abuse Program.

- ◉ Creates the requirements and solutions for how ICANN will operate the Next Round of New gTLDs.

- ◉ Defines and implements the criteria for evaluating applicants to be gTLD registries or registrars, and leads the management of many application evaluations.

- ◉ Facilitates capacity development for registries and registrars to support their ability to fulfill contractual obligations.

Industry Trends and Challenges

- Consolidation resulting from merger and acquisition

- Universal Acceptance

- Emergence of alternative namespaces

- Increasing legislation and regulatory initiatives

Service Delivery and Support

The team is structured around several areas of work:
- Global Support
- Service Delivery for Contracted Parties and Applicants

The team is responsible for the delivery of services and support to ICANN org functions, ICANN contracted parties (gTLD registries and registrars), registrar applicants, vendors, and the Internet community, in line with established service levels, policies and procedures.

In addition, the team provides vendor sourcing and contracting support, and business process and operationalization resources to projects within the new gTLD Program: Next Round.

GDS Technical Services Team

Main areas of focus are:

1. supporting others within ICANN org as domain name registration industry technology experts;

2. managing various systems development and operations relating to the registries, registrars, and/or Internet users in general;

3. managing services focused primarily on contracted parties; and

4. developing and maintaining technical specifications in open standards and engaging in technical forums.

This team's work permeates various ICANN areas of work:

- supporting active monitoring of contracted parties' contractual and policy obligations;

- offering "service health" datasets to gTLD and ccTLD operators;

- allowing the acquisition of datasets such as zone files;

- measuring Email Address Internationalization (EAI) support;

- gauging privacy/proxy service usage;

- developing proposals to handle new technologies (e.g., integration of Global DNS TLDs with alternative naming systems);

- supporting the policy development process regarding technological implications of policy choice.

Systems

- **SLA Monitoring (SLAM)**: A tool to measure the compliance with the Specification 10 of the new gTLDs Registry Agreement.

- **Monitoring System API (MoSAPI)**: A REST API that allows gTLD registries, participating country code top-level domains (ccTLDs) and ICANN accredited registrars to retrieve information collected by the SLAM.

- **Registration Reporting Interface (RRI)**: System of interfaces provided by ICANN to contracted parties including Registry Operators and Data Escrow Agents (DEA) to fulfill and monitor their applicable reporting requirements like RRI Monthly Reports and Data Escrow deposits.

- **Centralized Zone Data System (CZDS)**: Portal to simplify the process of requesting zone data and entering into individual and standardized agreements with the registries that provide TLD Zone Files.

- **RDAP conformance tool**: a stand-alone tool that verifies that an RDAP server implements the specifications developed by the IETF and the ICANN gTLD RDAP profile.

Systems

◉ **RDAP web client** (at https://lookup.icann.org): A javascript-based client application which makes use of the Registration Data Access Protocol (RDAP) to query, parse and display registration data in a human-friendly format. The results displayed come directly from registry operators and/or registrars in real-time.

◉ **Registry System Testing (RST)** - System that ensures that a Registry Operator (RO) is able to operate a generic Top-Level Domain in a stable and secure manner.

◉ **Zone File Access (ZFA)**: System to download the zone files from the gTLDs.

◉ **Bulk Registration Data Access (BRDA)**: System to download the BRDA files from the gTLDs.

◉ **Name Collision Reporting**: A name collision occurs when an attempt to resolve a name used in a private namespace (e.g. under a non-delegated Top-Level Domain, or a short, unqualified name) results in a query to the public Domain Name System (DNS).

Systems

- **EBERO (Emergency Back-end Registry Operators)**: An EBERO provider is temporarily activated if a generic Top-Level Domain (gTLD) operator is at risk of failing to sustain any of the five critical registry functions. Ensuring the availability of these functions protects registrants, also known as domain name holders, and provides an additional layer of protection to the Domain Name System (DNS), and industry ecosystem.

- **URS suspended website**: The Uniform Rapid Suspension System is a rights protection mechanism that complements the existing Uniform Domain-Name Dispute Resolution Policy (UDRP) by offering a lower-cost, faster path to relief for rights holders experiencing the most clear-cut cases of infringement.

- **Registry Monthly Report Publication**: Publication of the Per-Registrar Transactions Report and Registry Functions Activity Report at https://www.icann.org/resources/pages/registry-reports

Other Systems

- ◉ EAI testbed

- ◉ EAI survey tool

- ◉ Internal repository for obsolete IDN tables

- ◉ Big data repository for SLAM and BRDA

- ◉ EBERO data transfer service (tat servers)

- ◉ Reserved names monitoring

- ◉ Wildcard monitoring

- ◉ TMCH CA and CRL

- ◉ NP Tools - Registrar statistics

- ◉ RDAP Command Line Interface (CLI) client

- ◉ Technical Onboarding of gTLD registries

- ◉ Name Collision Controlled Interruption Monitoring

- ◉ gtlds.json and newgtlds.csv

- ◉ URS contact publication