# ICANN 65

## POLICY FORUM

## MARRAKECH

24–27 June 2019

# IANA Overview

Naela Sarras

ICANN65
28 June 2019

# Agenda

- Our team and structure within ICANN

- IANA and the root server operators

- Budget planning and engagement

# Our Team

**Alan Akahoshi**
PRODUCT MGMT

**Shaunte Anderson**
AUDIT

**Amanda Baber**
REQUEST SPECIALIST

**Michelle Cotton**
IETF RELATIONS

**Kim Davies**
PRESIDENT

**Ali Mohammadi**
SOFTWARE

**Selina Harrington**
REQUEST SPECIALIST

**Marilia Hirano**
EXCELLENCE & AUDIT

**Jennifer Johnson**
EXECUTIVE ASSISTANT

**Andres Pavez**
CRYPTO

**Seman Said**
SOFTWARE

**Naela Sarras**
SERVICE DELIVERY

**David Prangnel**
TECHNICAL SERVICES

**Sabrina Tanamal**
REQUEST SPECIALIST

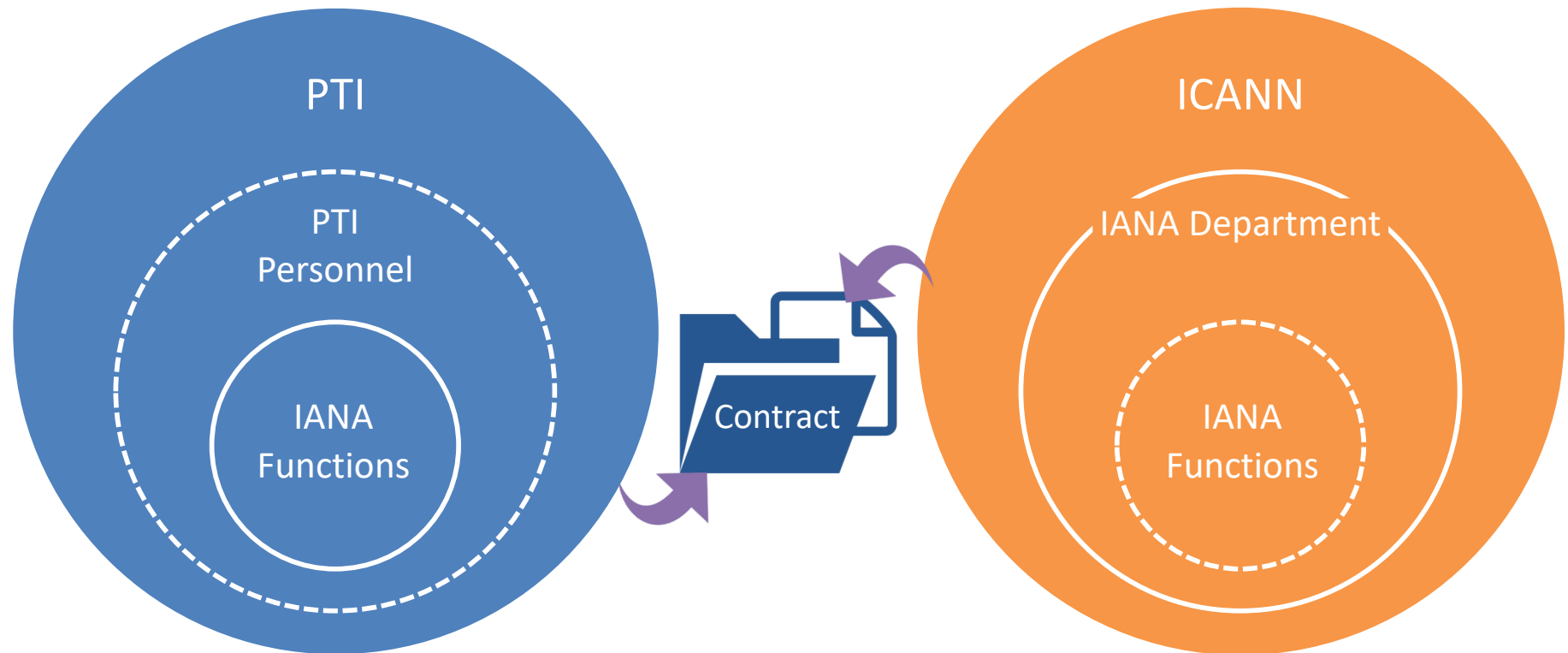**George Sarkisyan**
REQUEST SPECIALIST

**Claudia Stevens**
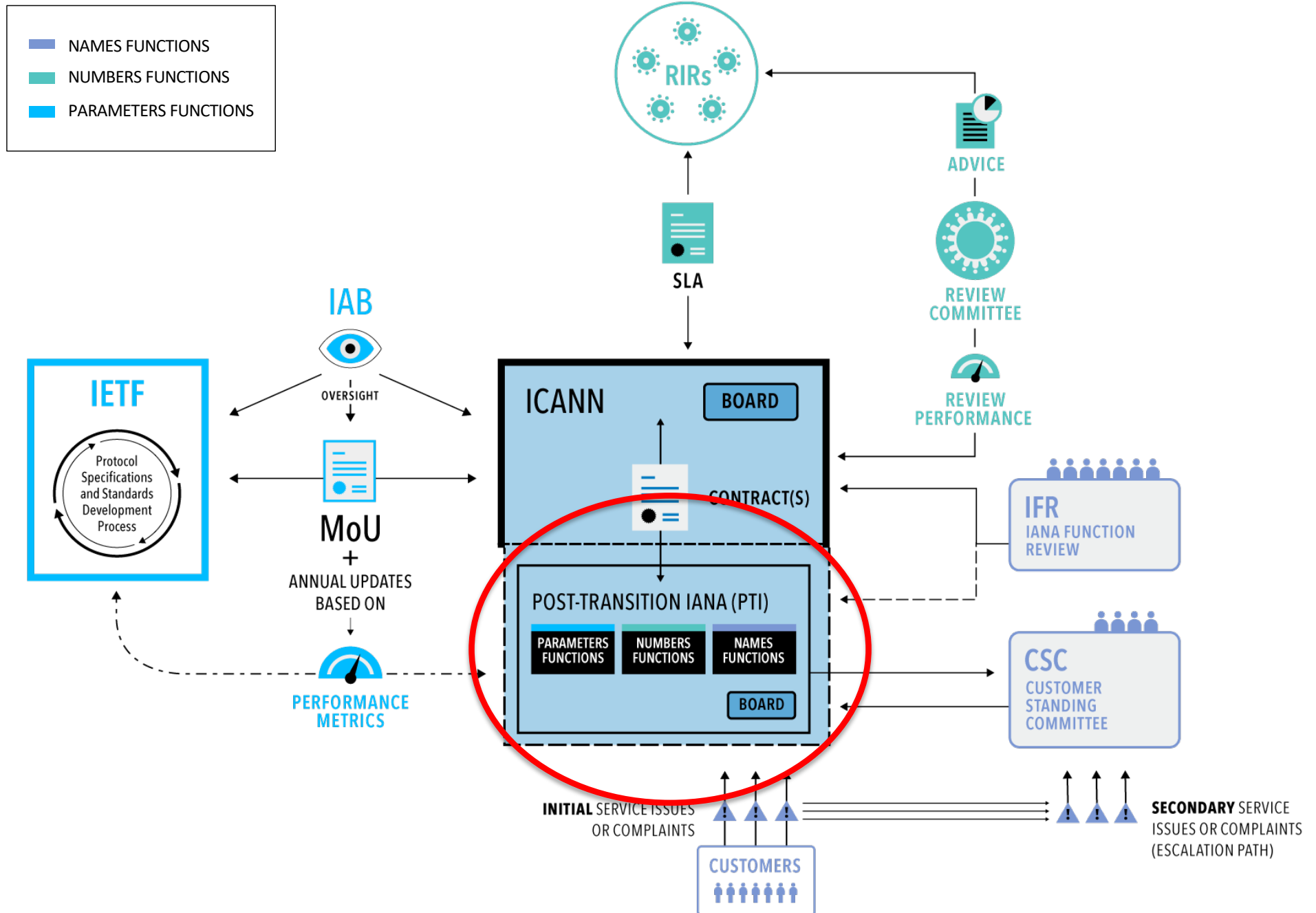REQUEST SPECIALIST

**Aaron Foley**
CRYPTO

# What Is PTI?

**Public Technical Identifiers (PTI)** is an affiliate of ICANN that is responsible for performing the IANA functions and delivering the IANA services on behalf of ICANN.

PTI

PTI Personnel

IANA Functions

Contract

ICANN

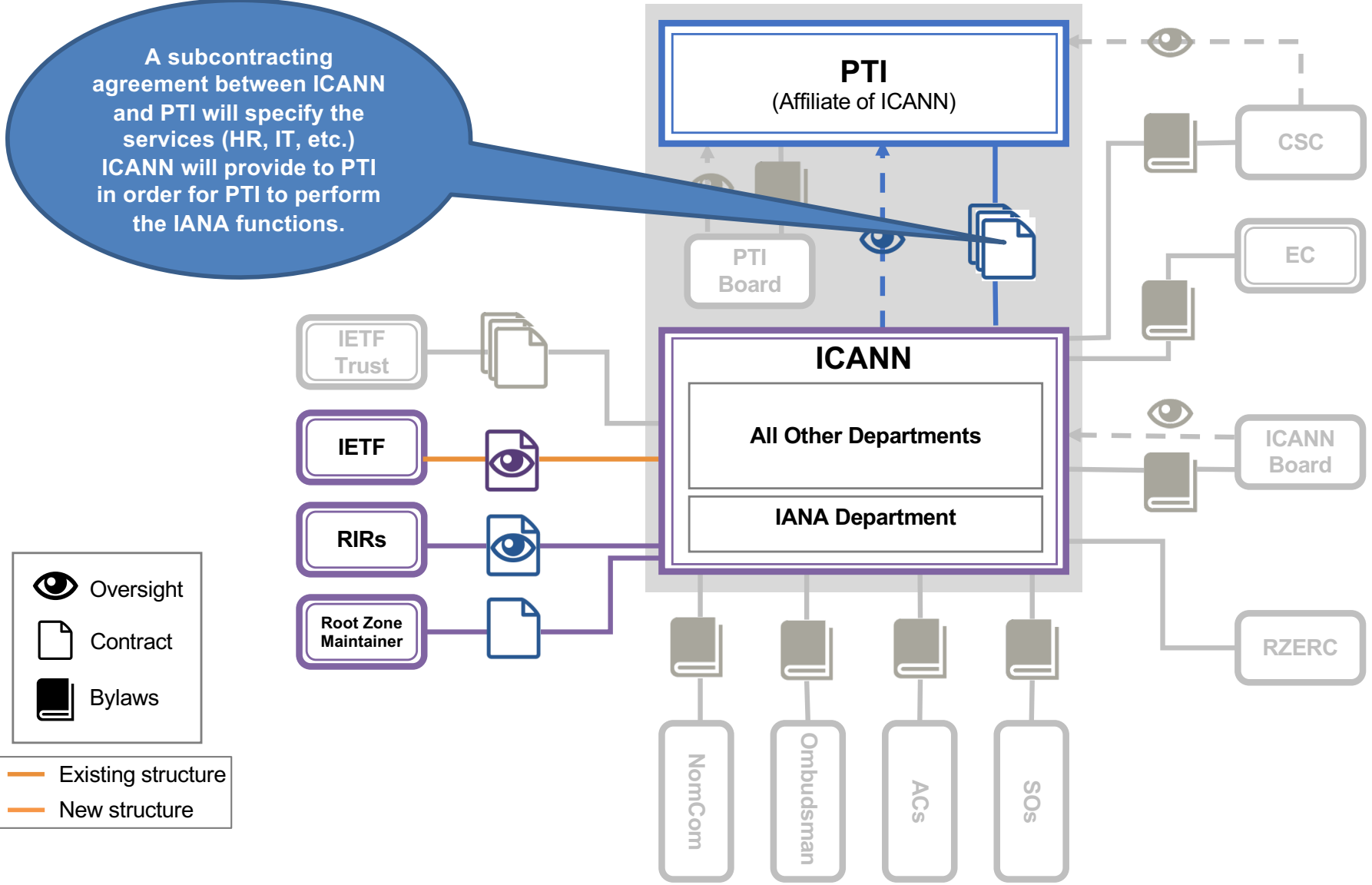IANA Department

IANA Functions

PTI implements agreed-upon policies
and principles developed by the ICANN multistakeholder community.

# PTI – a result of the IANA stewardship transition

# Relationship between ICANN and PTI



A subcontracting agreement between ICANN and PTI will specify the services (HR, IT, etc.) ICANN will provide to PTI in order for PTI to perform the IANA functions.

PTI
(Affiliate of ICANN)

CSC

EC

PTI Board

IETF Trust

ICANN

**All Other Departments**

**IANA Department**

ICANN Board

IETF

RIRs

Root Zone Maintainer

RZERC

Oversight

Contract

Bylaws

Existing structure

New structure

NomCom

Ombudsman

ACs

SOs

# PTI overview

## Legal

- Nonprofit public benefit corporation
- ICANN is sole member
- Domiciled in California
- 501(c)(3) tax status

## Organization

- Annual budget developed in consultation with the community
- Four-year strategic plan updated annually
- Annual independent financial audit of PTI financials

## Operations

- Perform name, protocol parameters, and number services via contract and subcontract with ICANN
- ICANN to provide all resources required to perform services

## Board

- Five directors appointed by ICANN
- Three from ICANN/PTI organizations
- Two from the ICANN NomCom process

## Officers

- President – Kim Davies
- Treasurer – Becky Nash
- Secretary – Samantha Eisner

## Staff

- No change in personnel performing the IANA functions
- Existing IANA department personnel seconded from ICANN to PTI

# What Stays the Same?

**Definition of the IANA functions**

Domain names, numbering resources, and protocol parameters

**Registries related to names, numbers, and protocol parameters**

**Individuals performing the work**

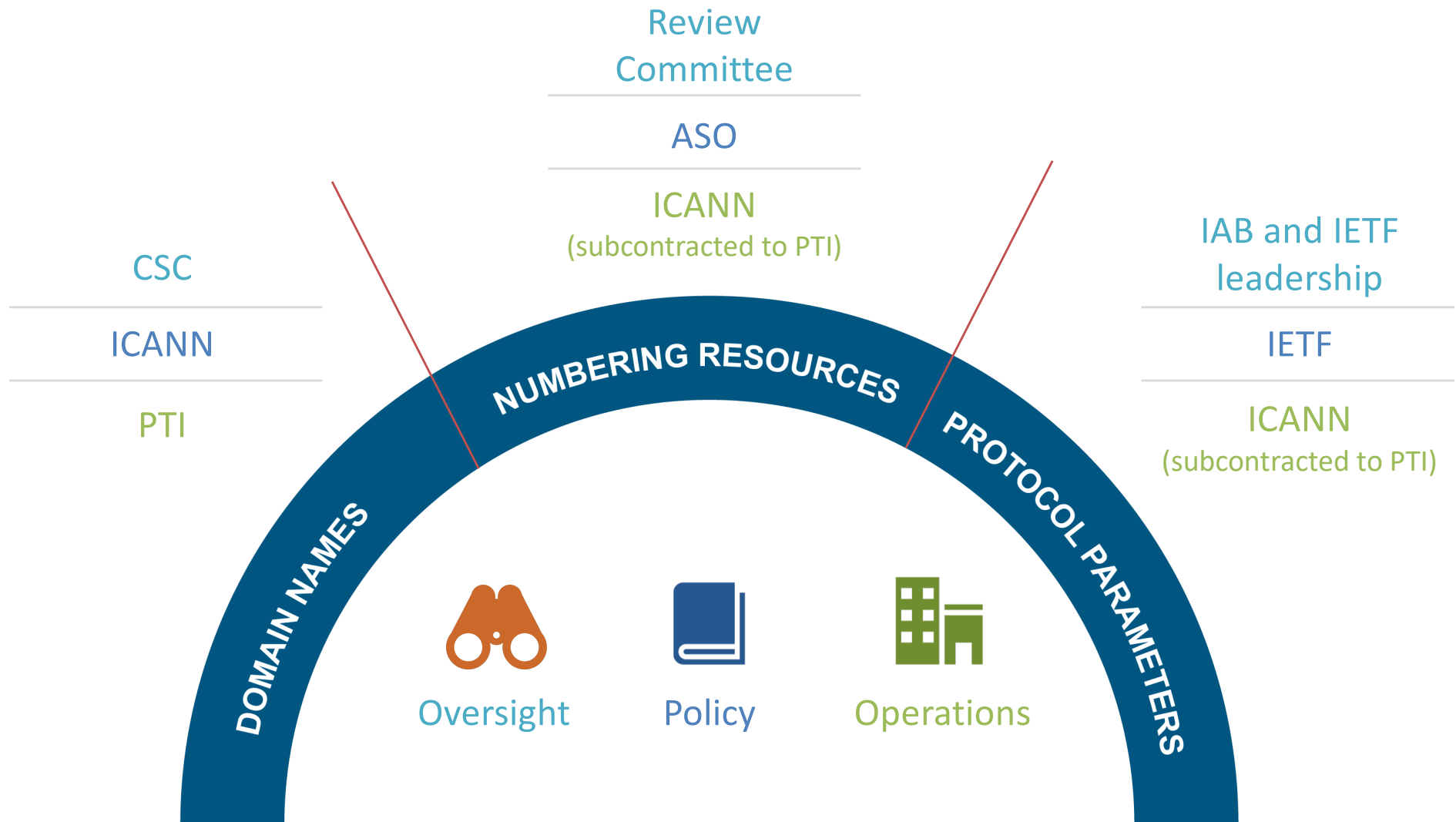IANA department personnel are seconded to PTI.

**Location of the operational information**

Operational reports of the IANA services will remain on iana.org.

**Methods for submitting changes or updates to the registries**

# ICANN Ecosystem with PTI



Review
Committee
ASO
ICANN
(subcontracted to PTI)

IAB and IETF
leadership
IETF
ICANN
(subcontracted to PTI)

CSC
ICANN
PTI

NUMBERING RESOURCES

DOMAIN NAMES

PROTOCOL PARAMETERS

Oversight        Policy        Operations

# What we actually do



The global coordination of the DNS Root, IP addressing, and other Internet protocol resources is performed as the Internet Assigned Numbers Authority (IANA) functions. Learn more.

## Domain Names

Management of the DNS Root Zone (assignments of ccTLDs and gTLDs) along with other functions such as the .int and .arpa zones.

- Root Zone Management
- Database of Top Level Domains
- .int Registry
- .arpa Registry
- IDN Practices Repository

## Number Resources

Coordination of the global IP and AS number spaces, such as allocations made to Regional Internet Registries.

- IP Addresses & AS Numbers
- Network abuse information

## Protocol Assignments

The central repository for protocol name and number registries used in many Internet protocols.

- Protocol Registries
- Apply for an assignment
- Time Zone Database

# IANA and the Root Server Operators

# IANA is the source of data for root servers

- IANA provides the contents of the root zone served by the root servers

- Occasionally, IANA processes requests for changes to IP addresses for the root servers themselves
  - As part of processing such requests, we have also worked with RSOs to:
    - Coordinate timing and communication regarding the change
    - Update RSO contacts in IANA's internal database

# Communicating with RSOs

- IANA maintains an internal list of contacts for each root server operator.
  - Includes name and email address(es) of contacts at each RSO
- Contact information may be out of date
  - No interface between IANA and the root server operators to update their contact information
- How much data should we maintain? One or two contacts for each RSO? More data?
- There is no formal process by which to notify IANA of changes to contacts.
- What about emergency cases? Are there any?

# iana.org/domains/root/servers

## Root Servers

The authoritative name servers that serve the DNS root zone, commonly known as the "root servers", are a network of hundreds of servers in many countries around the world. They are configured in the DNS root zone as 13 named authorities, as follows.

## List of Root Servers

| HOSTNAME | IP ADDRESSES | MANAGER |
|---|---|---|
| a.root-servers.net | 198.41.0.4, 2001:503:ba3e::2:30 | VeriSign, Inc. |
| b.root-servers.net | 199.9.14.201, 2001:500:200::b | University of Southern California (ISI) |
| c.root-servers.net | 192.33.4.12, 2001:500:2::c | Cogent Communications |
| d.root-servers.net | 199.7.91.13, 2001:500:2d::d | University of Maryland |
| e.root-servers.net | 192.203.230.10, 2001:500:a8::e | NASA (Ames Research Center) |
| f.root-servers.net | 192.5.5.241, 2001:500:2f::f | Internet Systems Consortium, Inc. |
| g.root-servers.net | 192.112.36.4, 2001:500:12::d0d | US Department of Defense (NIC) |
| h.root-servers.net | 198.97.190.53, 2001:500:1::53 | US Army (Research Lab) |
| i.root-servers.net | 192.36.148.17, 2001:7fe::53 | Netnod |
| j.root-servers.net | 192.58.128.30, 2001:503:c27::2:30 | VeriSign, Inc. |
| k.root-servers.net | 193.0.14.129, 2001:7fd::1 | RIPE NCC |
| l.root-servers.net | 199.7.83.42, 2001:500:9f::42 | ICANN |
| m.root-servers.net | 202.12.27.33, 2001:dc3::35 | WIDE Project |

# Ideas for improvement

- Once a year, IANA reaches out to all RSOs to ask if the information we have on file for each RSO is still accurate

- IANA also shares its 24x7 contact information with RSOs on a regular basis

- Long term: IANA creates an interface for Root Server Operators in the Root Zone Management System (RZMS)
  - This enables contacts at RSOs to maintain current contact information and request changes via the root zone workflow system

# Budget Planning and Engagement

# FY21 Budget

*At least nine months prior to the commencement of each fiscal year, the Corporation shall submit to the PTI Board and the Board of Directors of ICANN a proposed annual operating plan and budget for the Corporation's next fiscal year ("Annual Budget").*

- Fiscal Year 2021 Budget covers 1 July 2020 — 30 June 2021.

*During the Annual Budget development process, and prior to approval of the Annual Budget by the PTI Board, the Corporation shall consult with the Supporting Organizations and Advisory Committees, as well as the Registries Stakeholder Group, IAB and RIRs (all as defined in the ICANN Bylaws).*

- We need your feedback on priorities that need to be reflected in our draft budget

# FY21 Budget Assumptions

- Customers are happy with service and no fundamental changes are required beyond ongoing refinement and renewal of service delivery.
- New areas of activity foreseen that involve adapting/expanding existing processes and systems:
  - TLD variants
  - Future round of gTLDs (expected costs to be funded by that program)
- Stable headcount and funding

# Potential work with fiscal impact

- **Root Zone Management System** development and maintenance
- **Protocol parameter management system** development
- **IANA website** significant refresh
- **Variant TLDs** implementation
- **KSK rollover increased cadence**

# Thank you!

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