

# Community Dialogue: A Proposed Governance Model for the DNS Root Server System

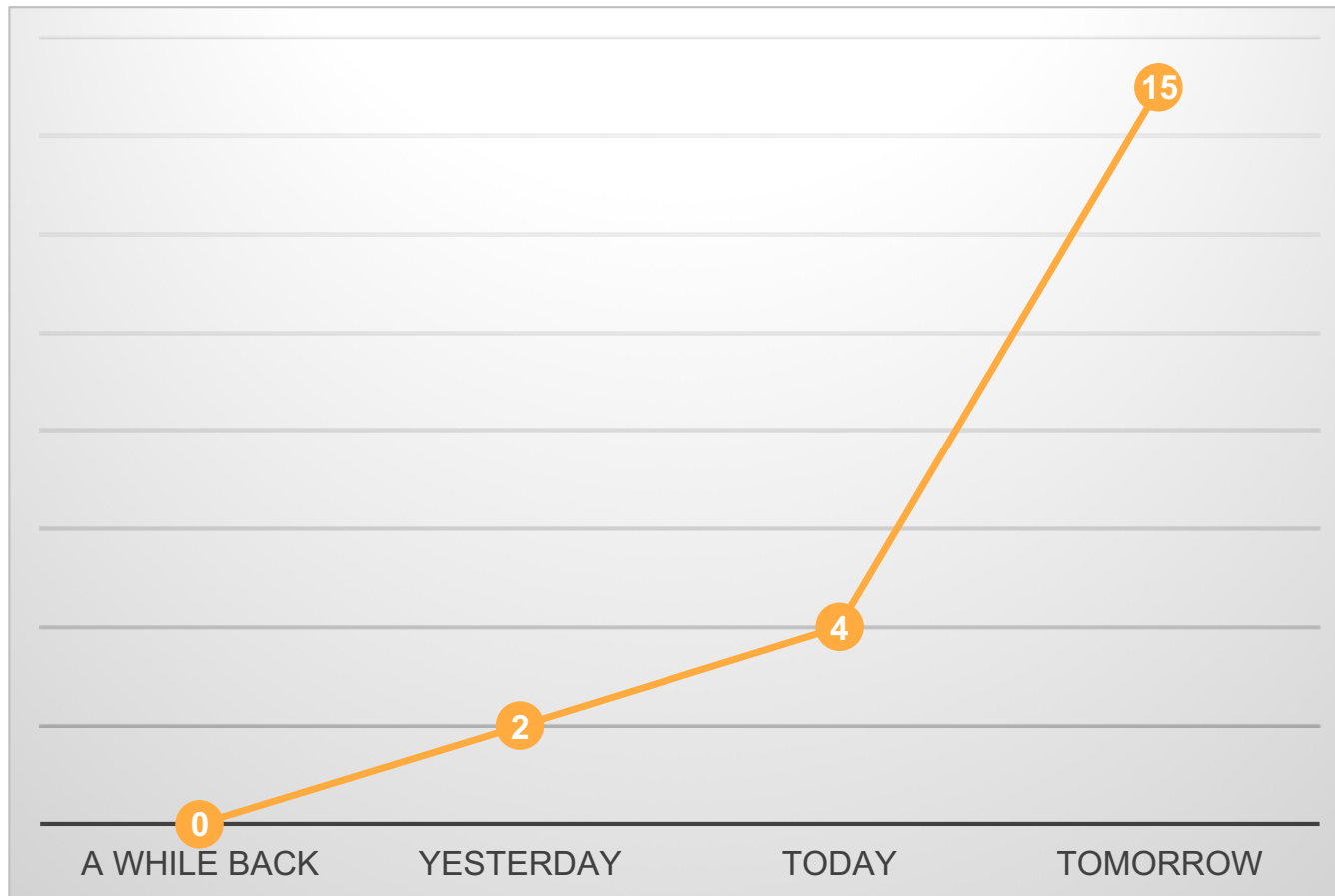
Tripti Sinha and Brad Verd, RSSAC Co-Chairs

ICANN 62 Panama Session  
27 June 2018

# Agenda

- Presentation of A Proposed Governance Model for the DNS Root Server System (30 min)
- Scenarios (30 min)
- Community Dialogue (30 min)

# The Staggering Growth of the Internet



# A Few Acronyms

**RSS**

- Root Server System

**RS**

- Root Server

**RSO**

- Root Server Operator

**SF**

- Secretariat Function

**SAPF**

- Strategy, Architecture, and Policy Function

**DRF**

- Designation and Removal Function

**PMMF**

- Performance Monitoring and Measurement Function

**FF**

- Financial Function

# Setting the Context and Expectations

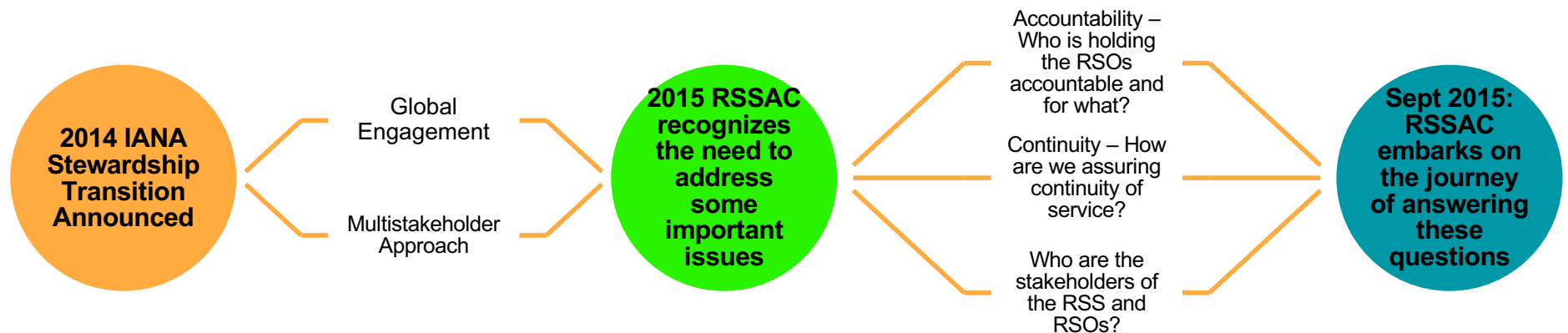
3-year Effort

- New work with RSSAC focus only

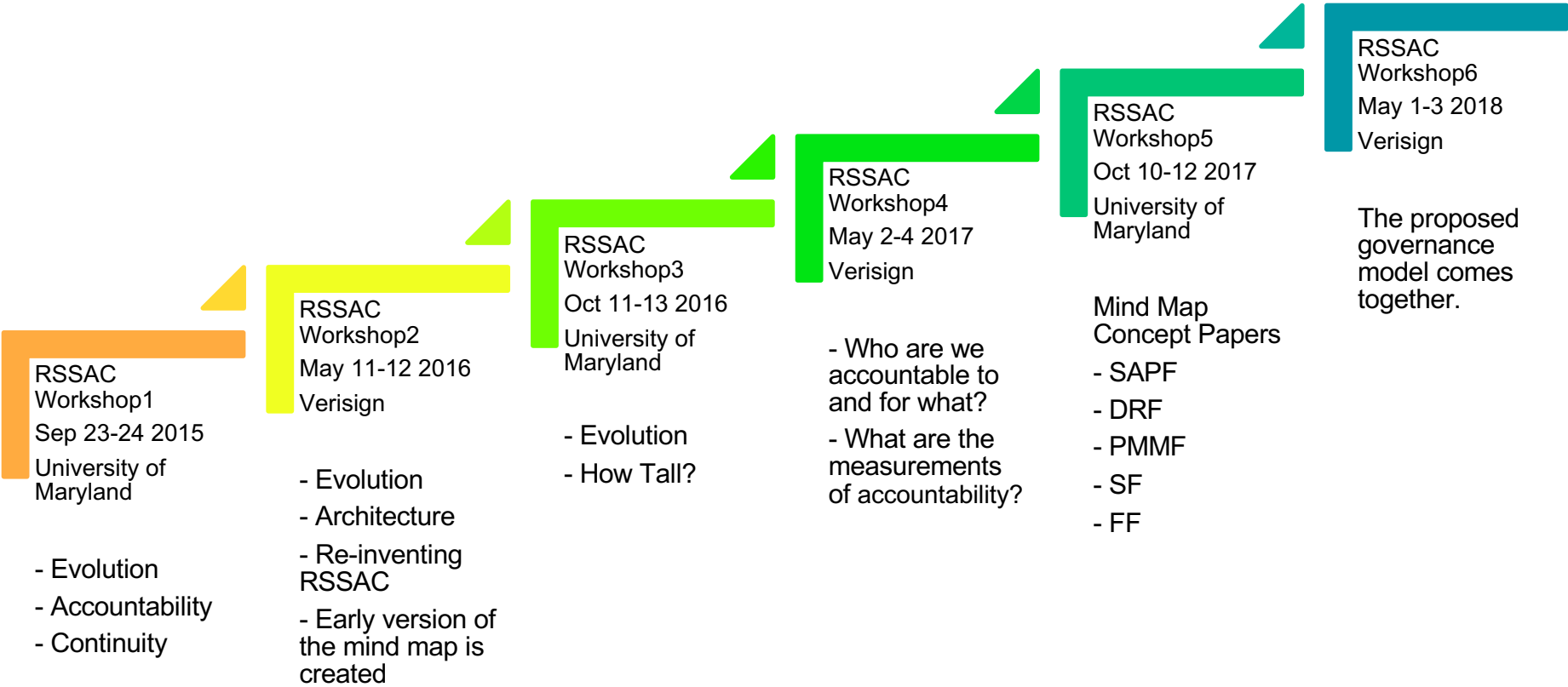
An initial draft model

- RSSAC is providing a starting point

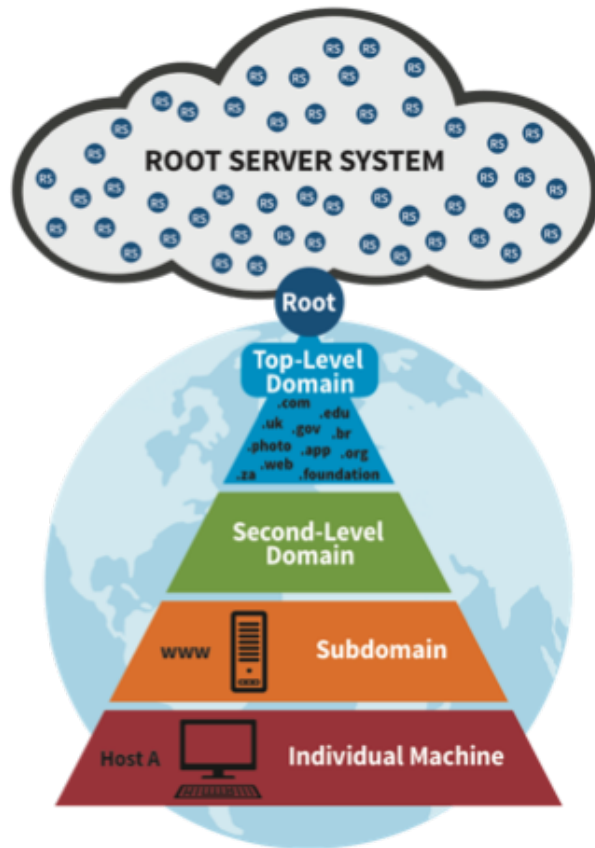
# Our initial impetus “to workshop”



# The Workshop Timeline and What Happened



# Global DNS Root Services



## 1000+ DNS root server instances in the global DNS root cloud

1. Cogent Communications
2. ICANN
3. Internet Systems Consortium
4. NASA Ames Research Center
5. Netnod
6. Réseaux IP Européens Network Coordination Centre
7. University of Maryland
8. University of Southern California, Information Sciences Institute
9. U.S. Department of Defense Network Information Center
10. U.S. Army Research Laboratory
11. Verisign, Inc.
12. WIDE Project and Japan Registry Services



# Root Server System Principles

• To remain a global network, the Internet requires a globally unique public namespace.

Principle 1

• IANA is the source of DNS root data.

Principle 2

• The RSS must be a stable, reliable, and resilient platform for the DNS service to all users.

Principle 3

• Diversity of the root server operations is a strength of the overall system.

Principle 4

• Architectural changes should result from technical evolution and demonstrated technical need.

Principle 5

• The IETF defines technical operation of the DNS protocol.

Principle 6

• RSOs must operate with integrity and an ethos demonstrating a commitment to the common good of the Internet.

Principle 7

• RSOs must be transparent.

Principle 8

• RSOs must collaborate and engage with the stakeholder community.

Principle 9

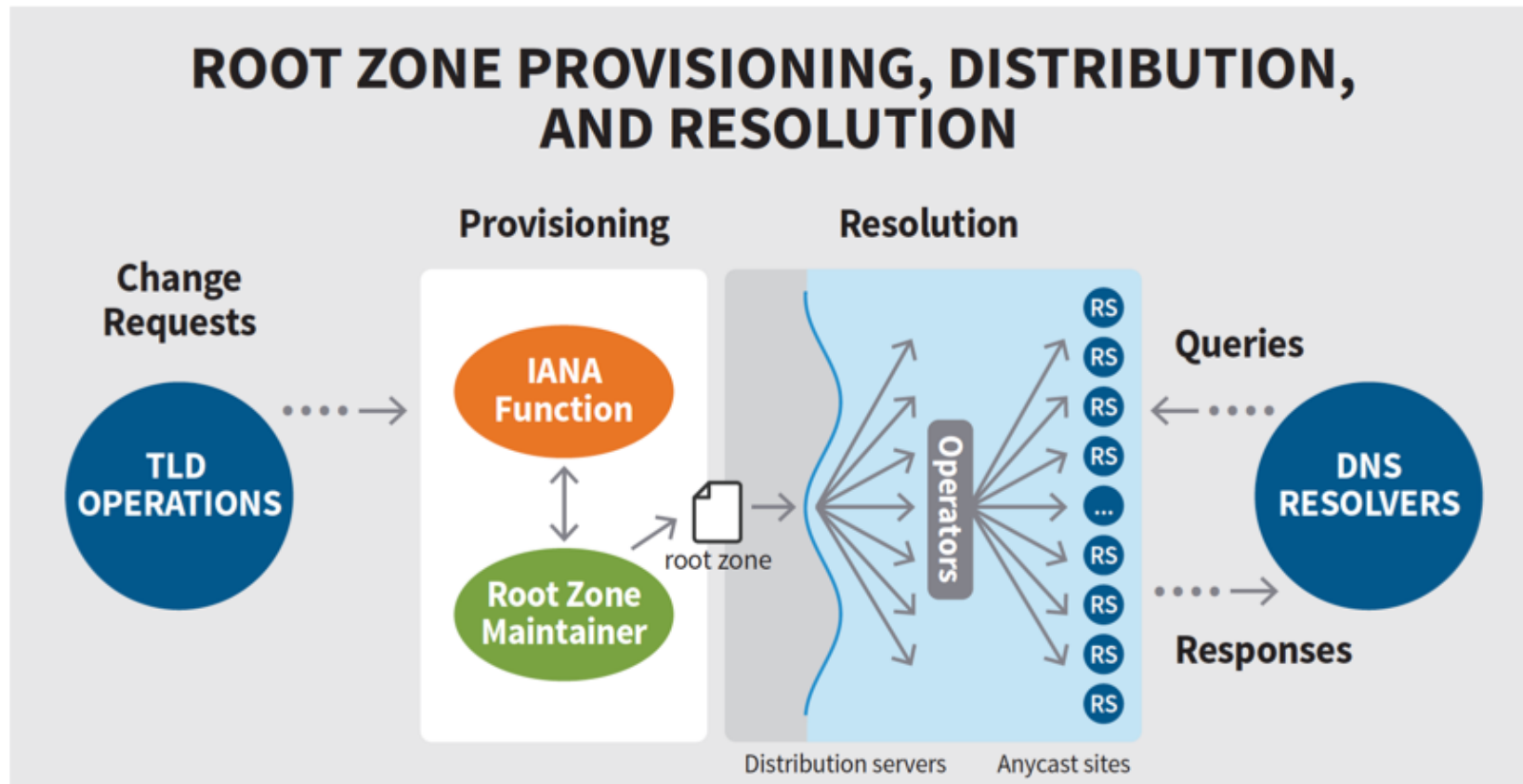
• RSOs must be autonomous and independent.

Principle 10

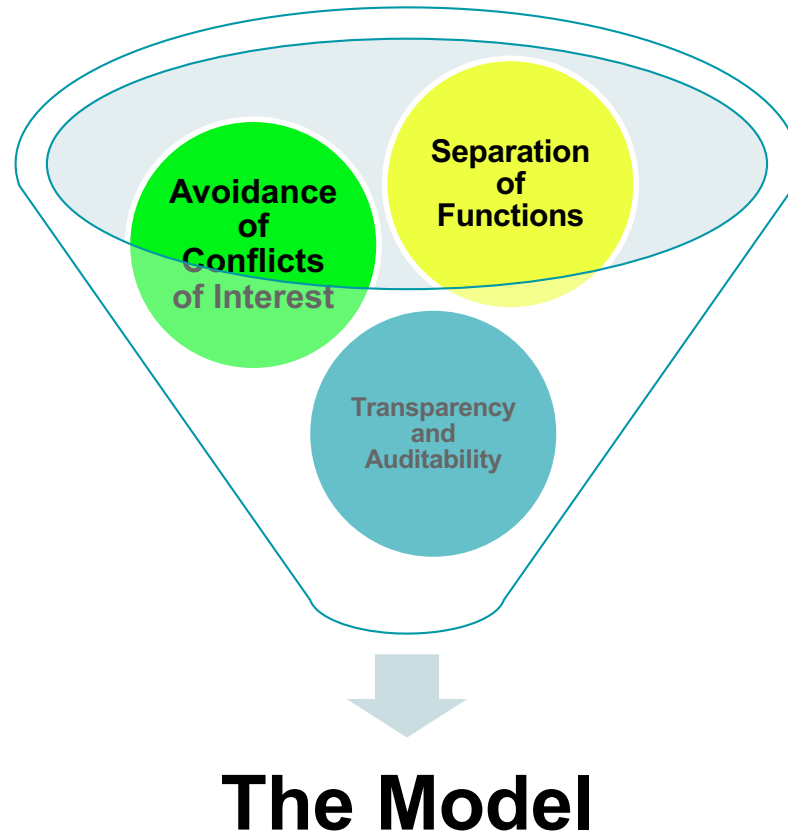
• RSOs must be neutral and impartial

Principle 11

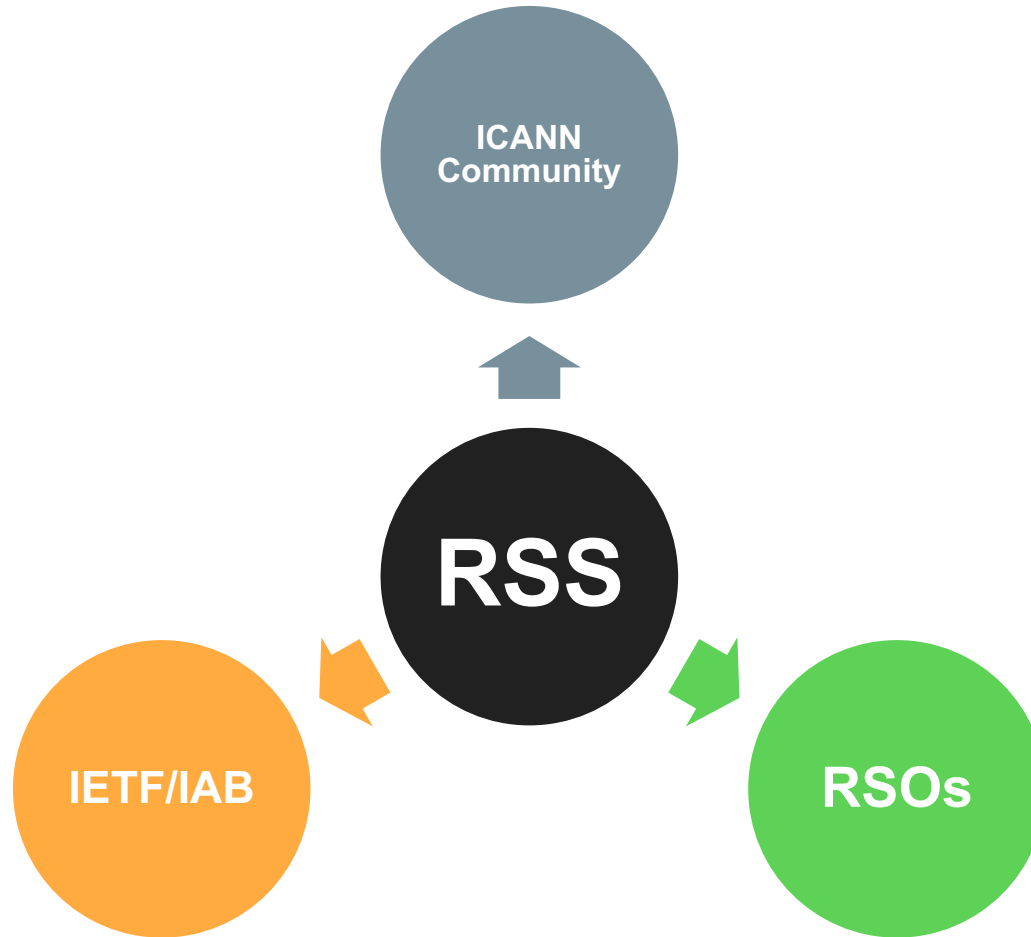
# Scope of Proposed Model



# Model Design Principle

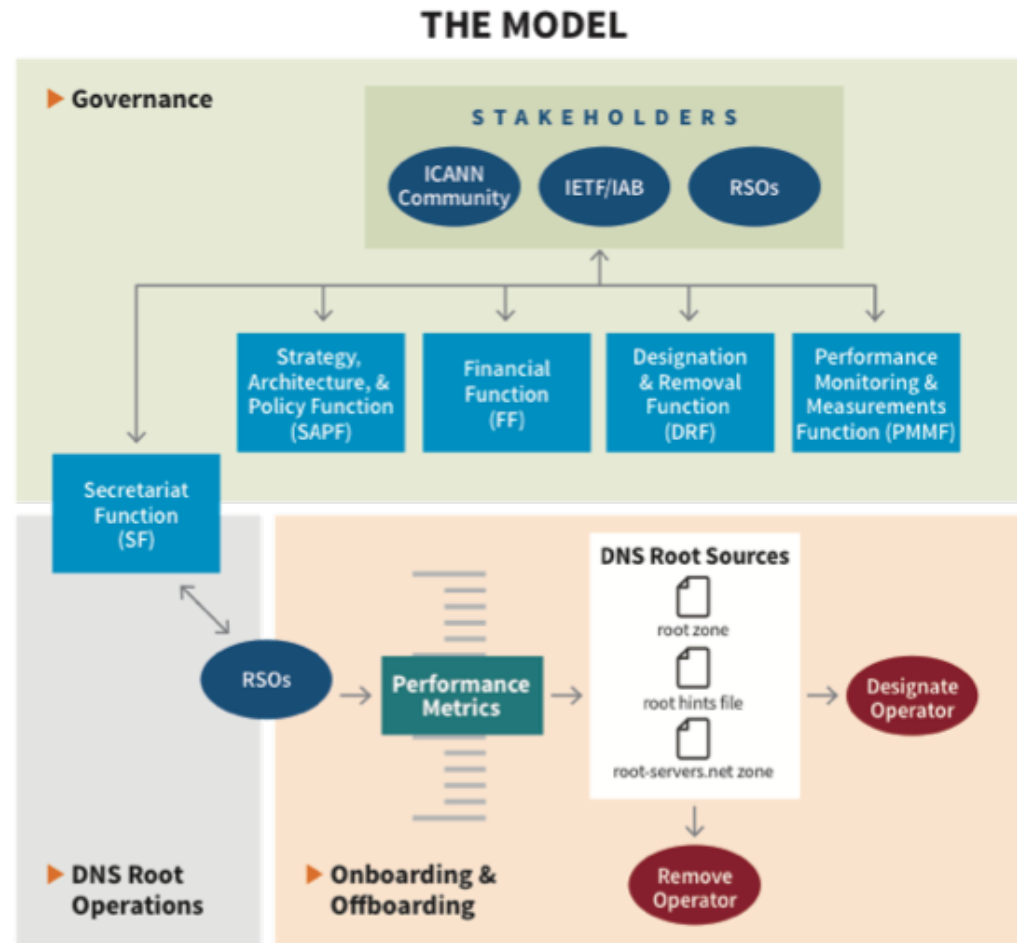


# Stakeholders

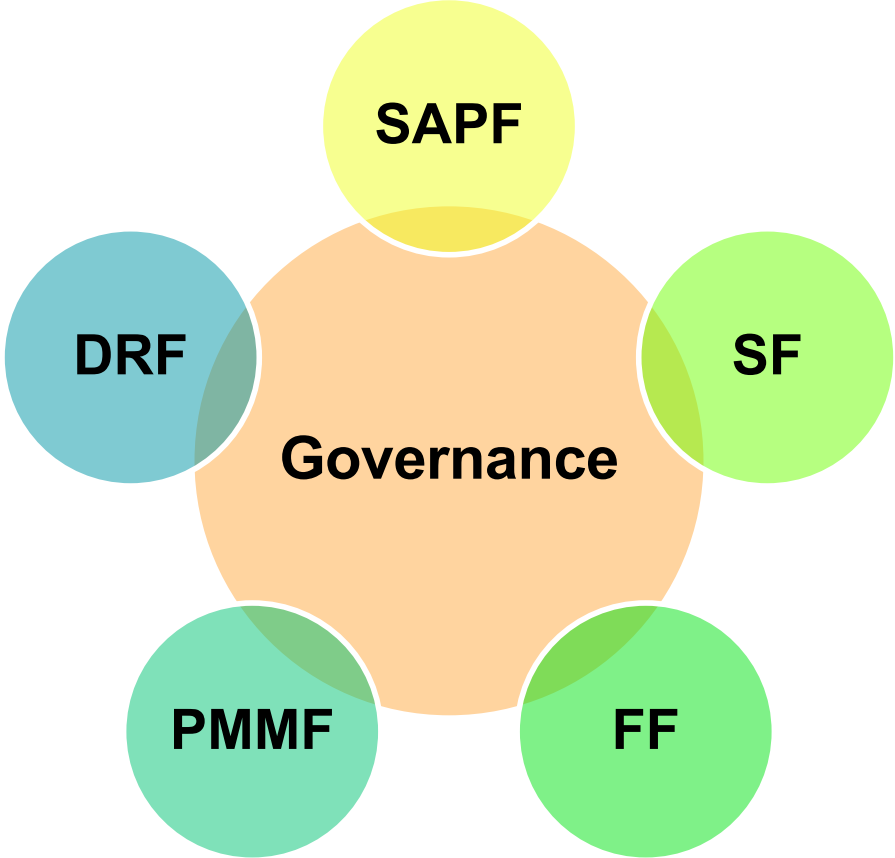


# Governance:

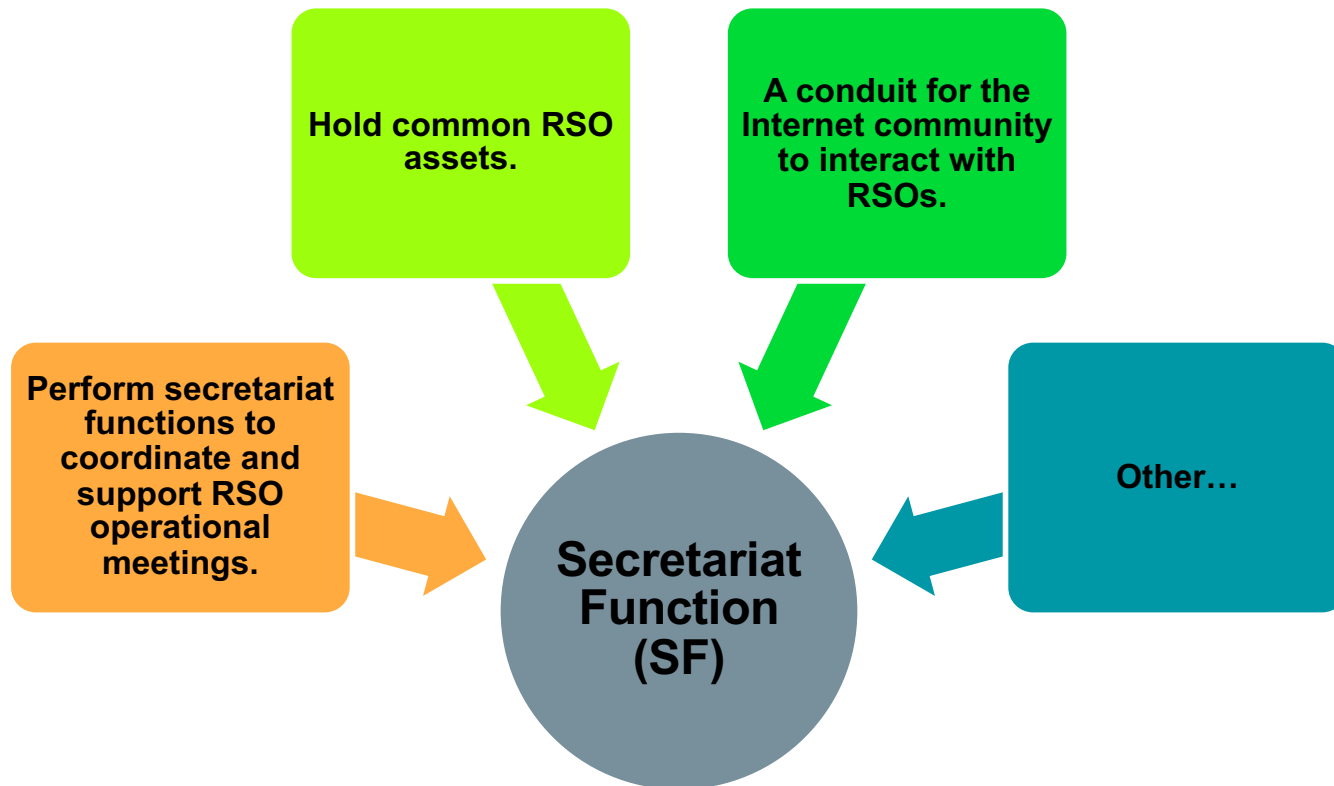
an interplay of three constructs operating in tandem



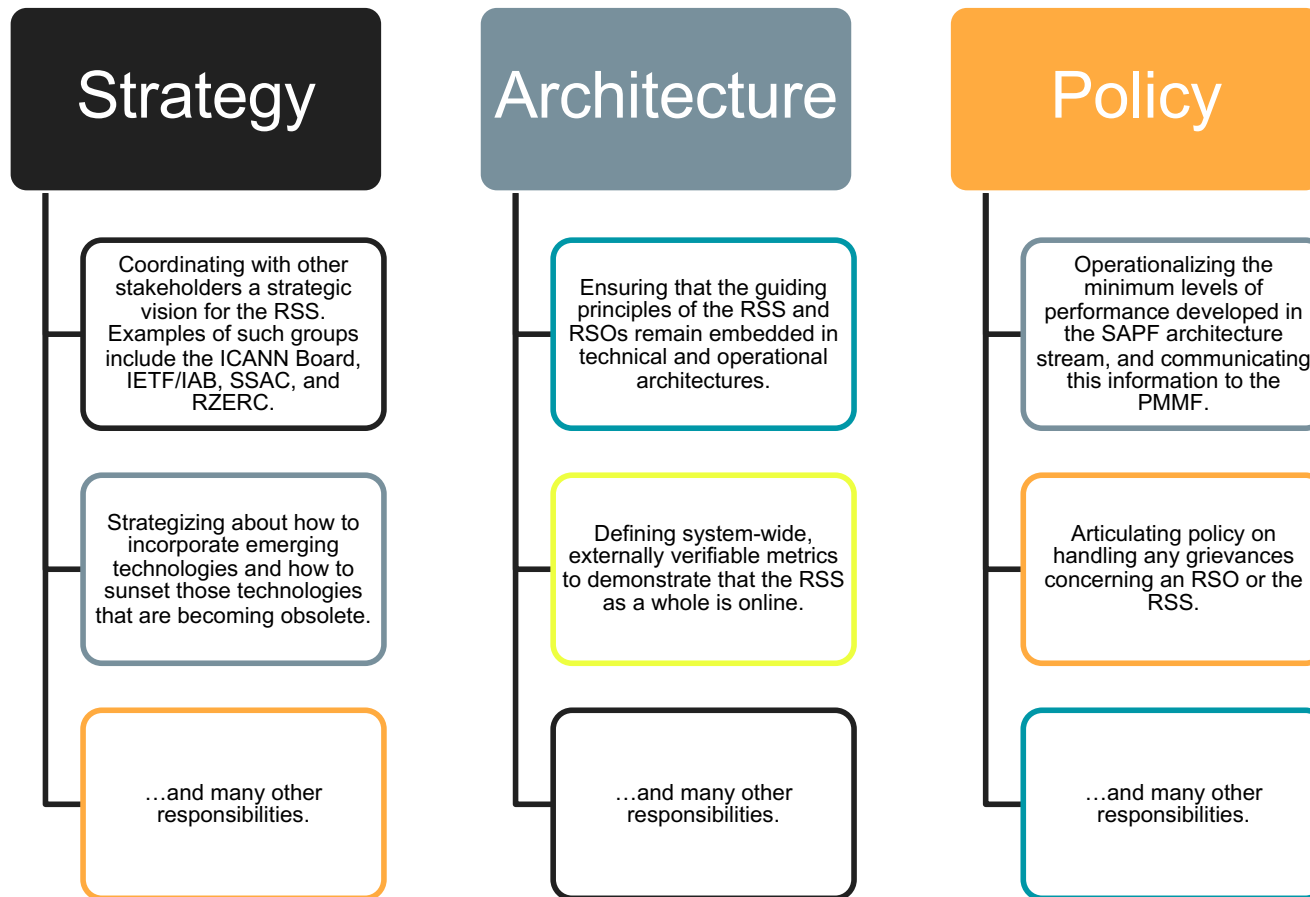
Governance: A balance of interplay of separate functions



# Secretariat Function (SF)



# Strategy Architecture and Policy Function (SAPF)



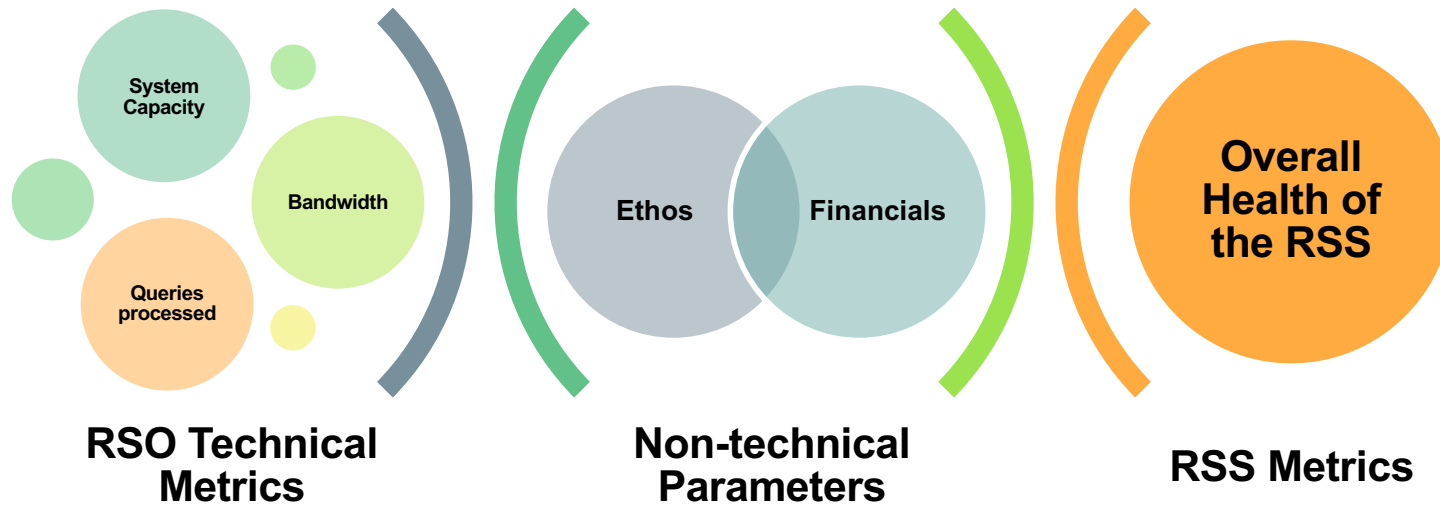


# Designation and Removal Function (DRF)

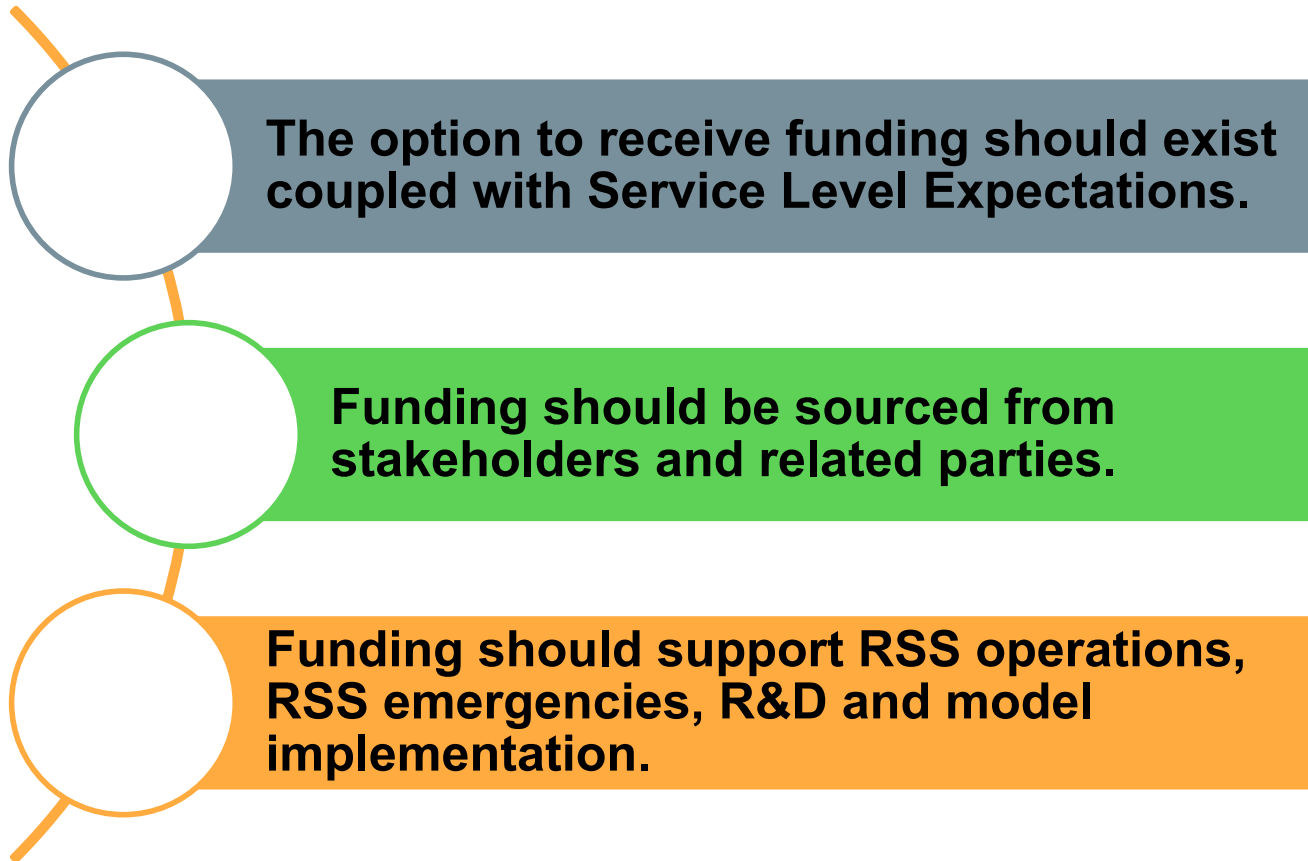


# Performance Monitoring and Measurements Function (PMMF)

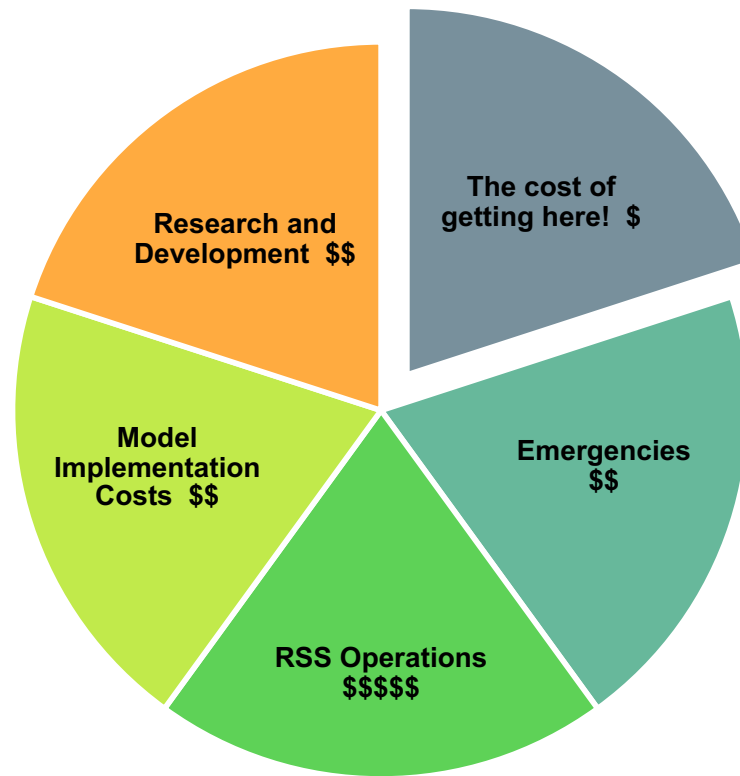
A sample of what could be measured and monitored



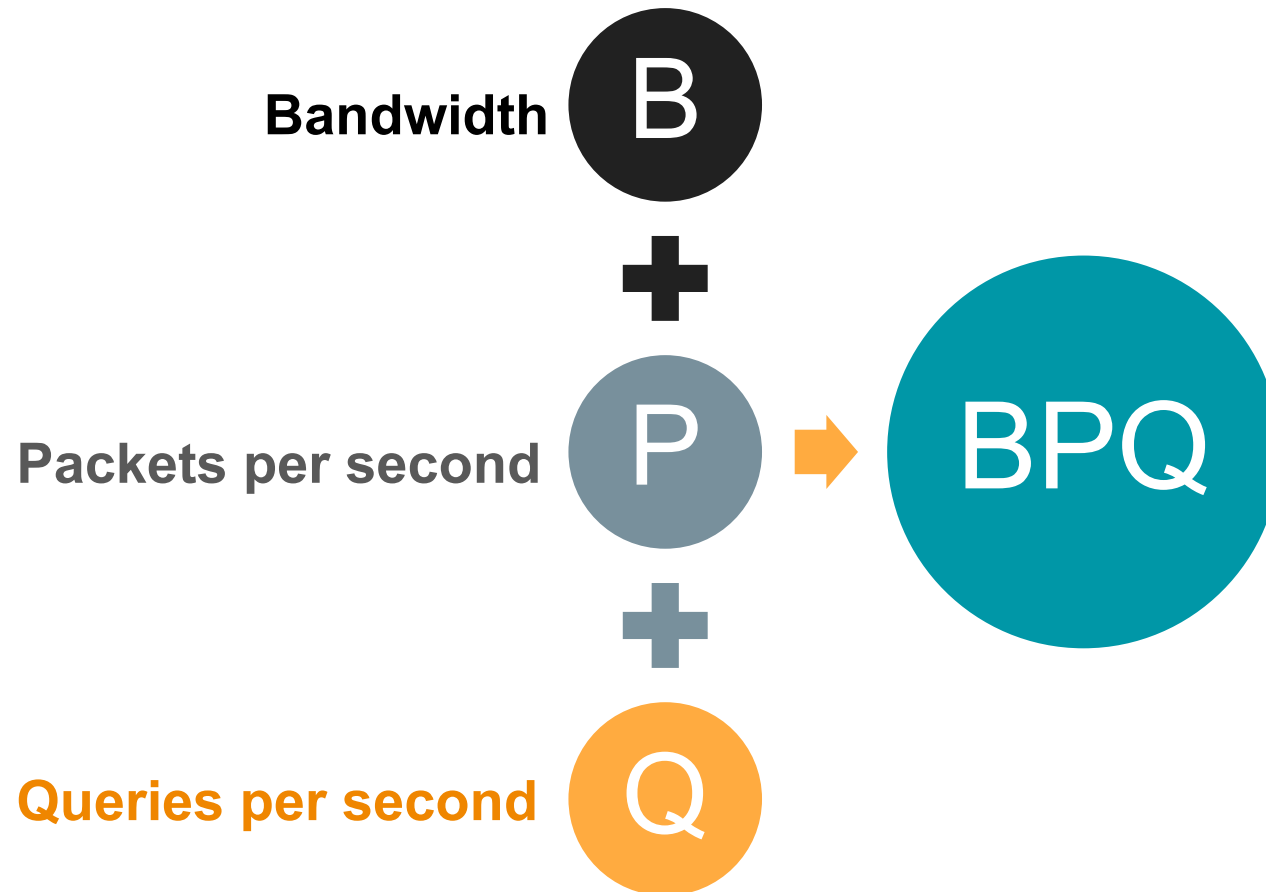
# Financial Function (FF)



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# Introducing BPQ – a proposed RSS capacity indicator



# Determining the cost for the value of BPQ

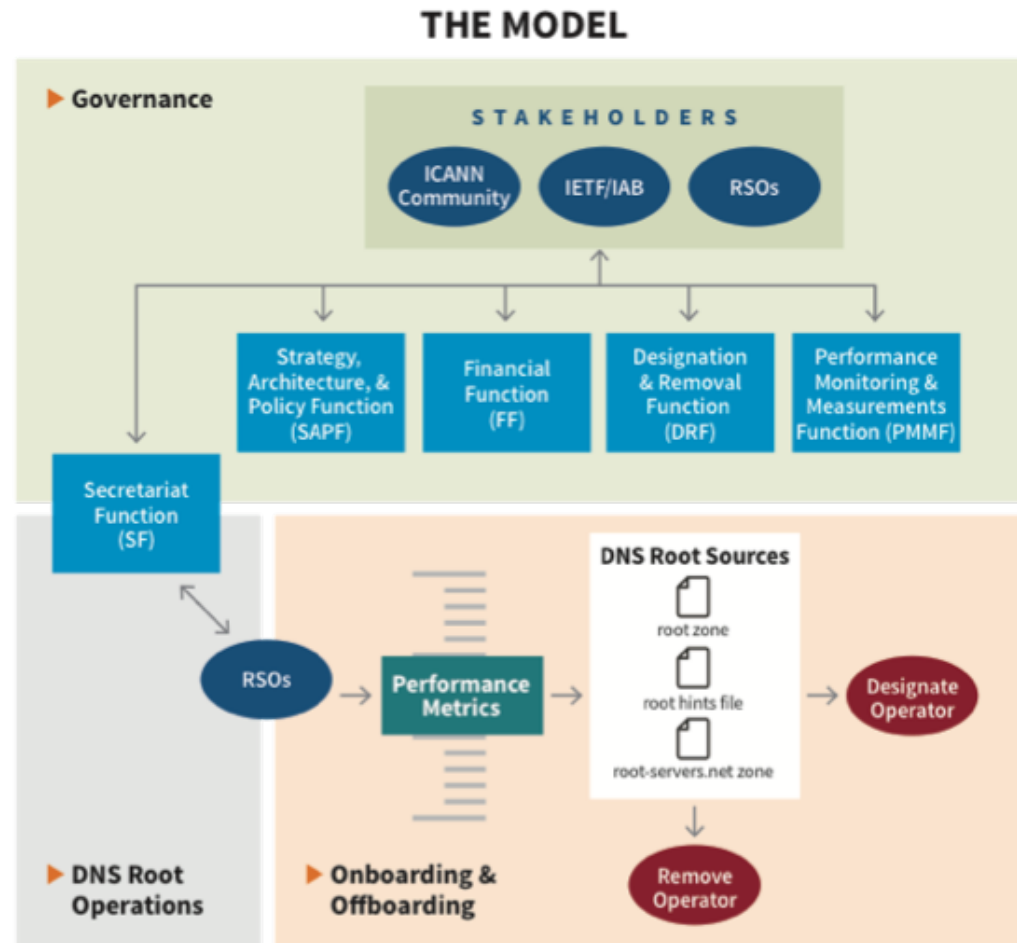


## Estimated Cost of the Model



# Manifesting the Model:

A Set of Three Recommendations





# Recommendations

## Recommendation 1

- The RSSAC recommends that the ICANN Board initiate a process to produce a final version of the Model for implementation based on RSSAC037.

## Recommendation 2

- The RSSAC recommends that the ICANN Board refer to RSSAC037, section 5.5.3 to estimate the costs of the RSS and developing the Model. Initial efforts should focus on developing a timeline for costing these.

## Recommendation 3

- The RSSAC recommends that the ICANN Board and community implement the final version of the Model based upon the principles of accountability, transparency, sustainability, and service integrity.

## Scenarios – Testing the Model

Designation

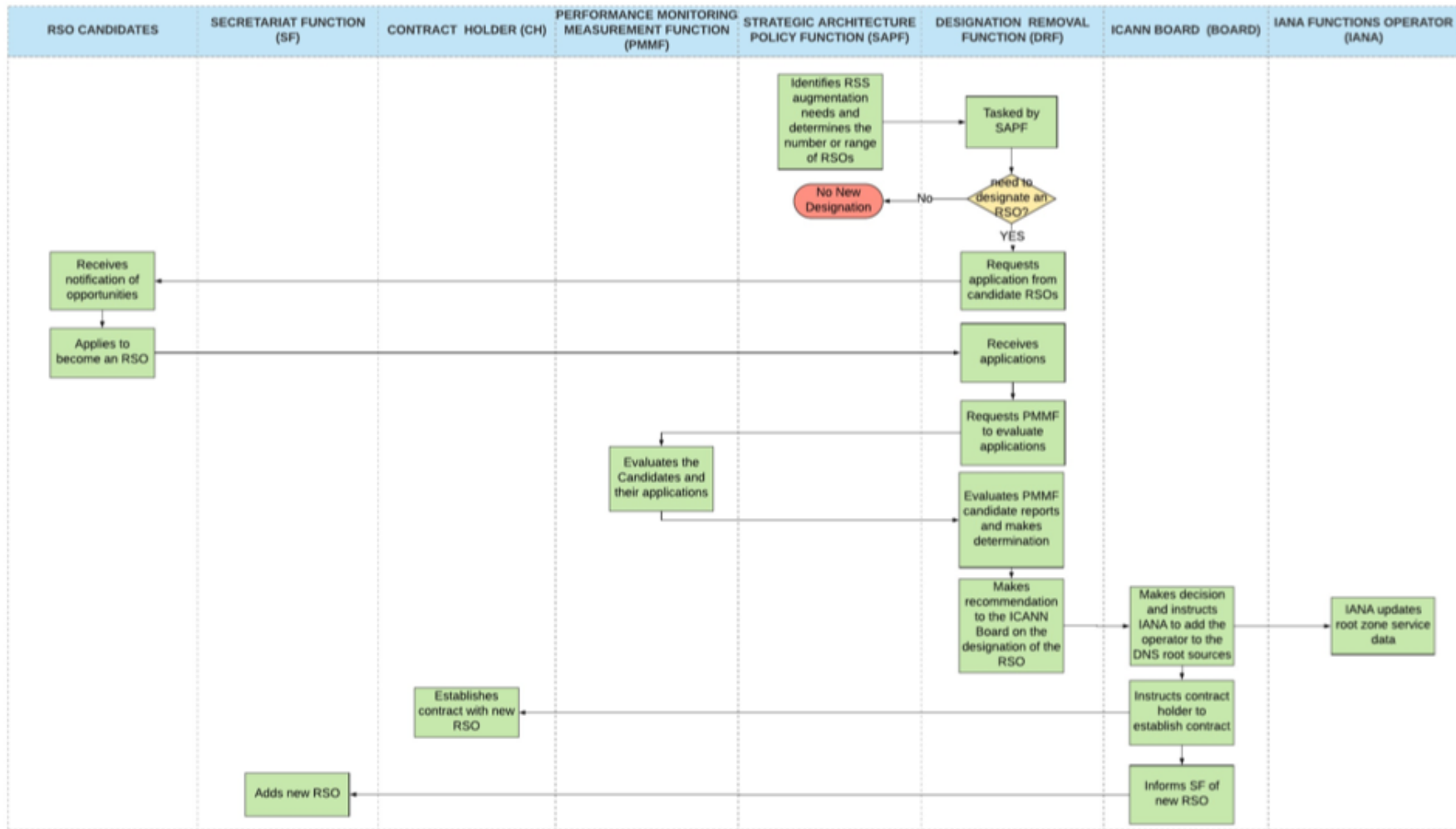
Voluntary resignation

Poor performance

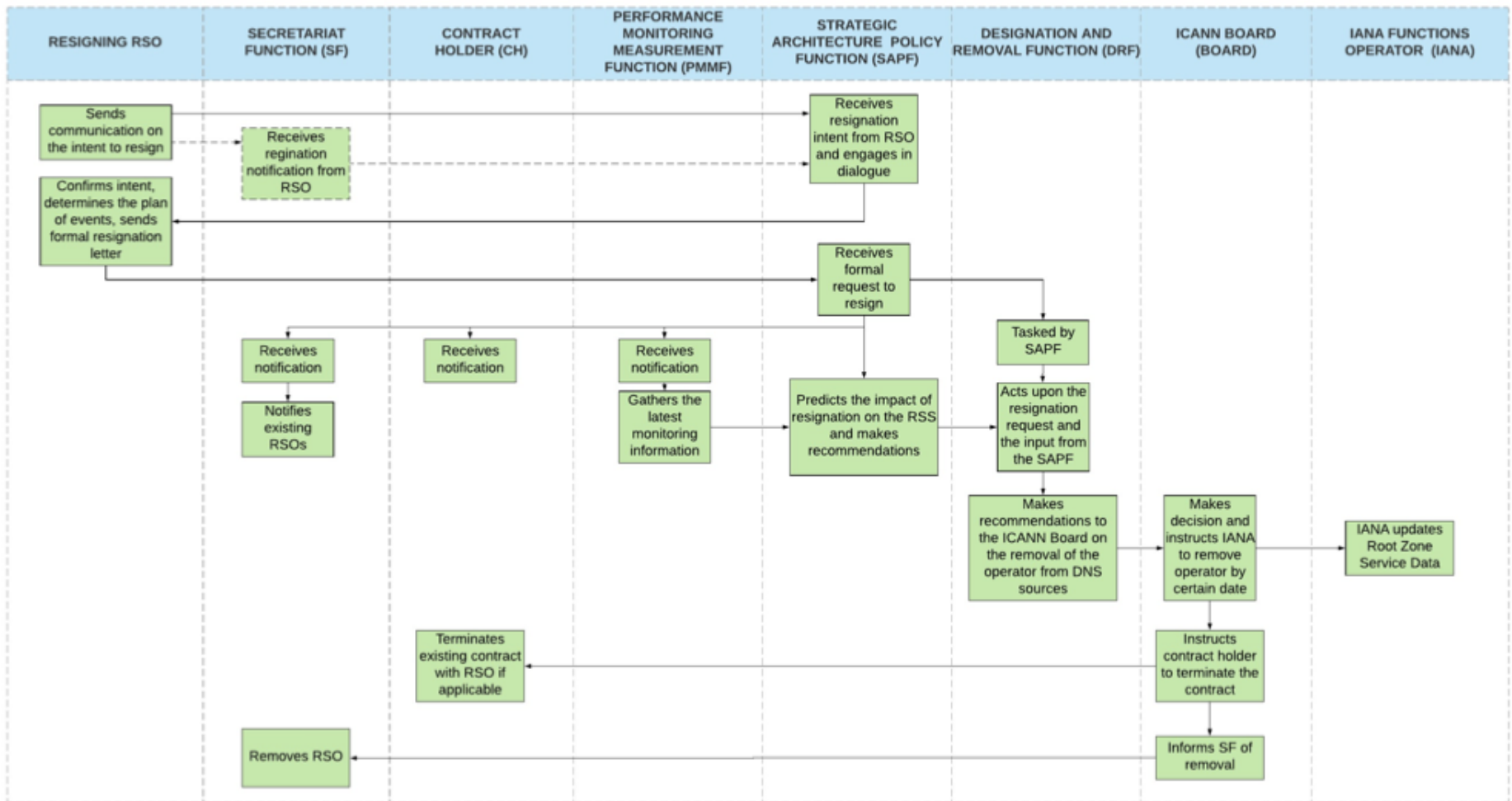
Catastrophic shutdown

Rogue Operator

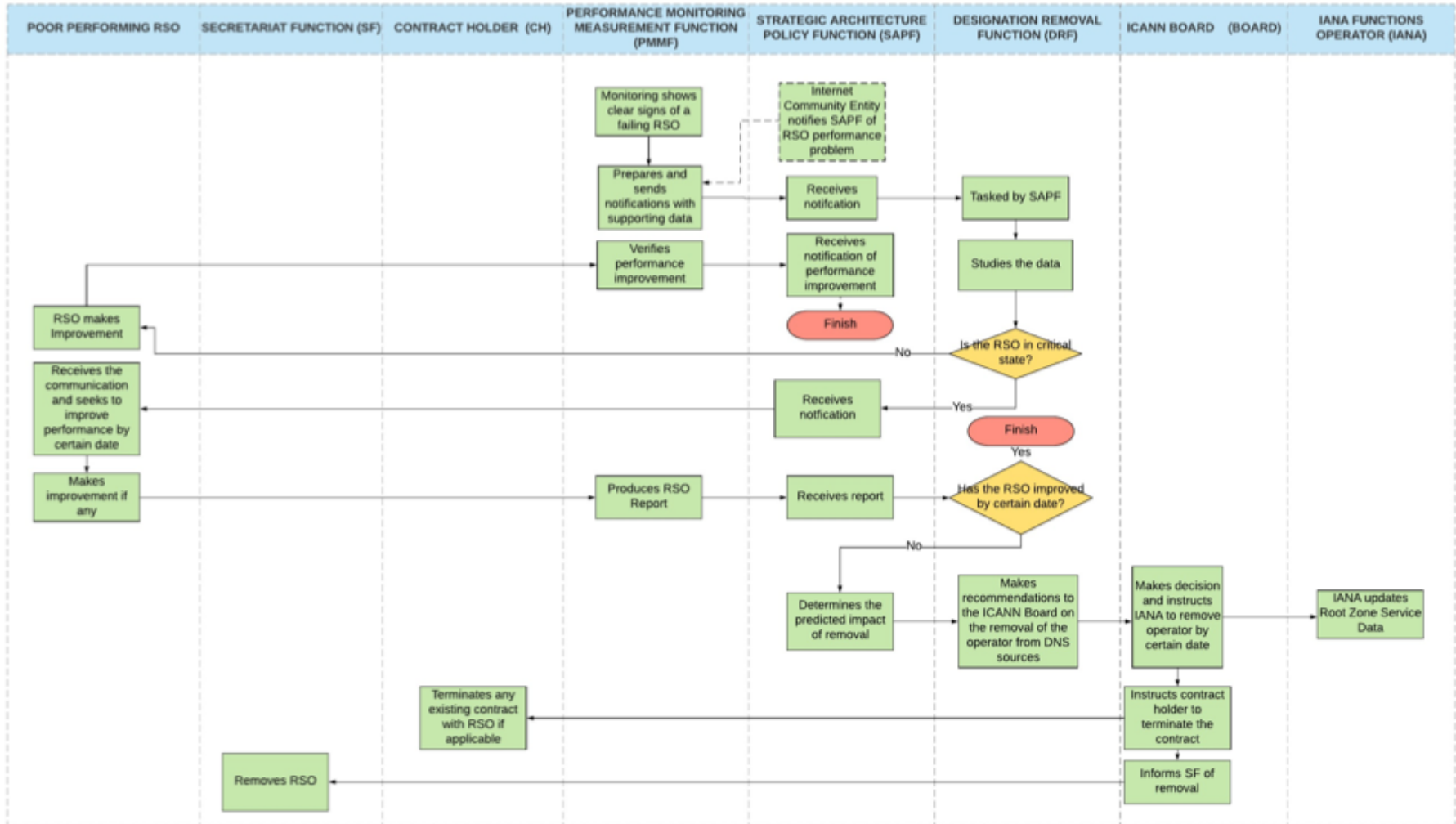
# Designation Scenario



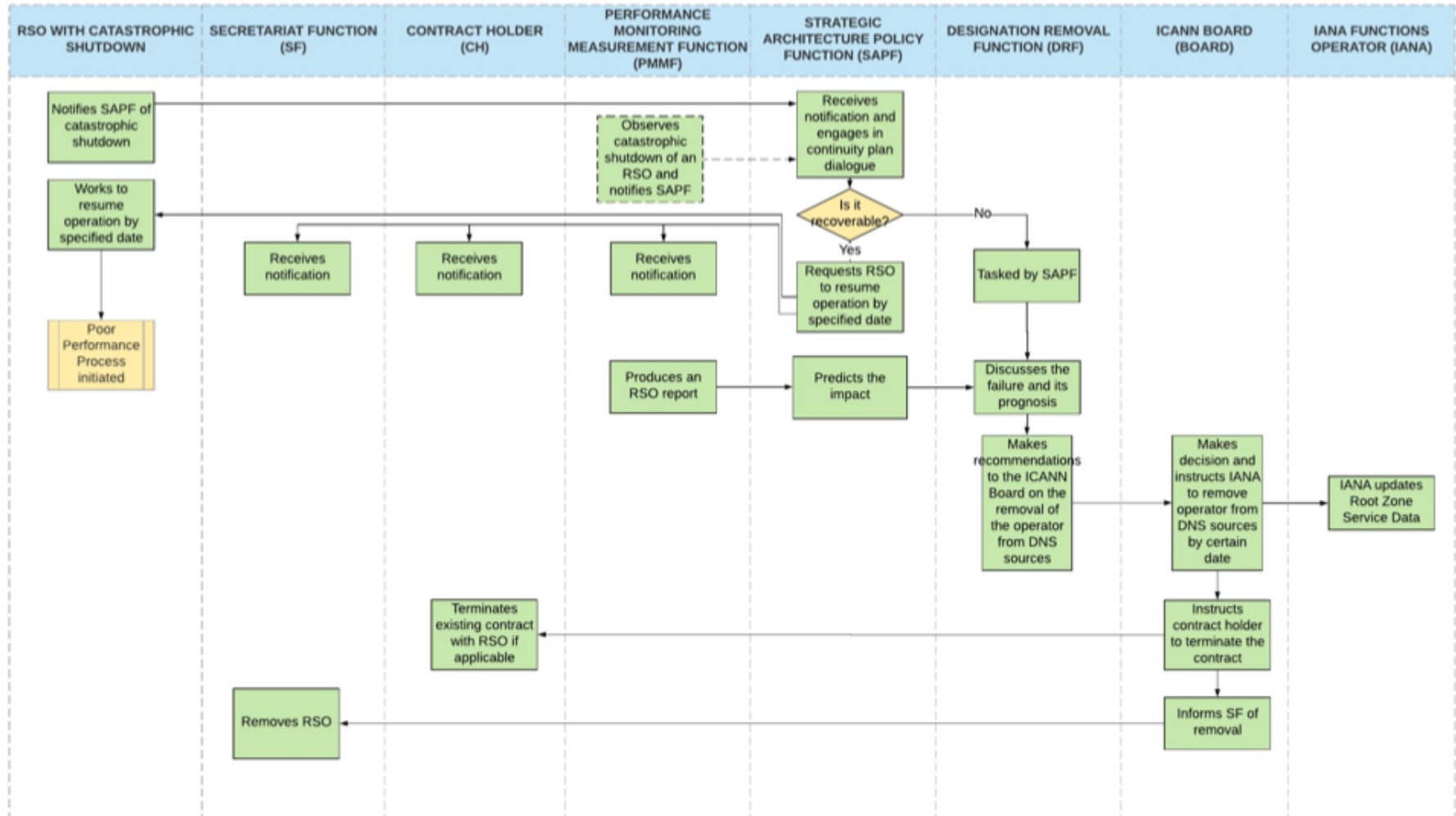
# Voluntary Resignation Scenario



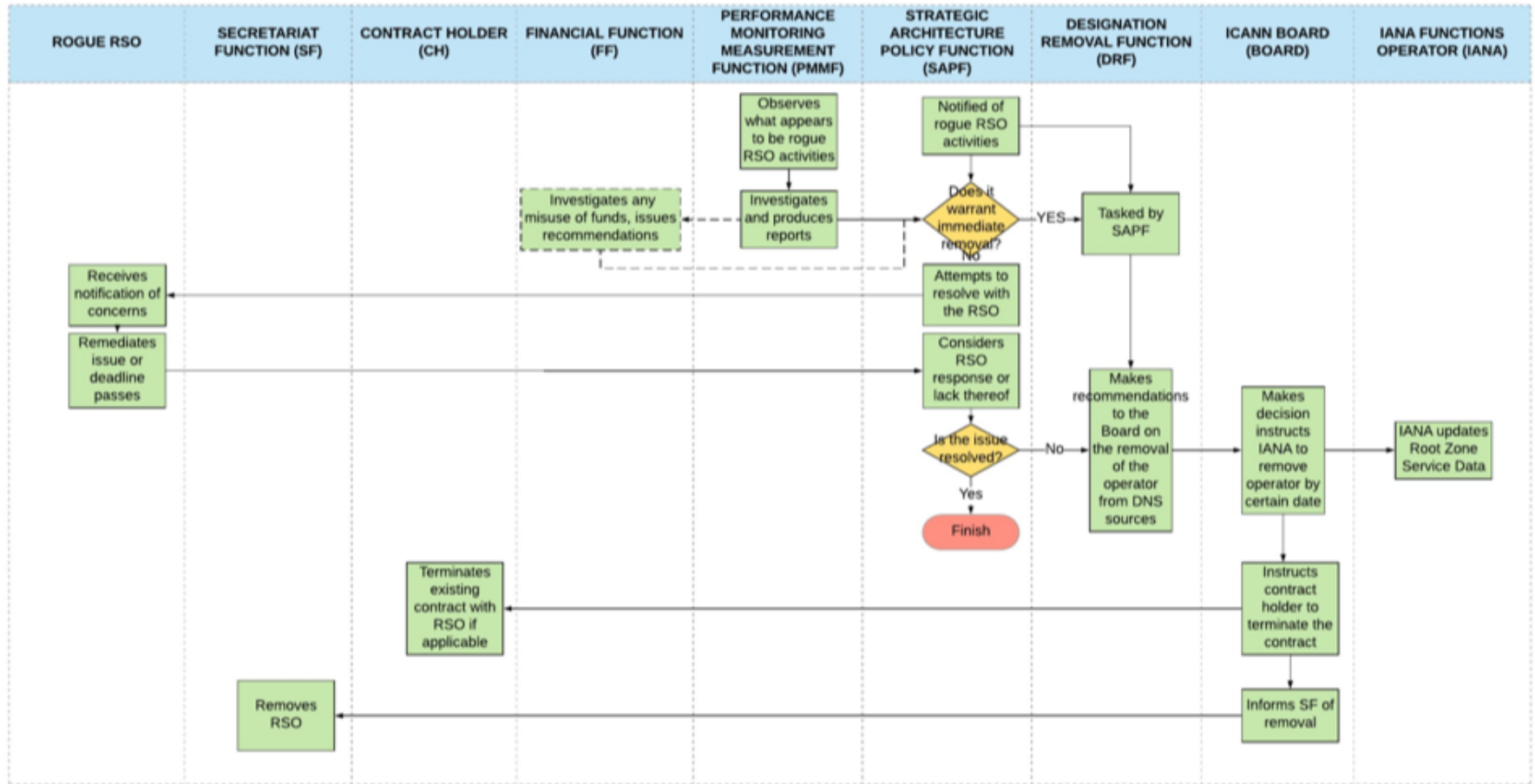
# Poor Performance Scenario



# Catastrophic Shutdown Scenario



# Rogue Operator Scenario



Q & A

Questions?