

EWG Final Report: Next Generation Registration Directory Service (RDS) Overview

Expert Working Group on gTLD
Directory Services (EWG)
23 June, 2014



Session Agenda



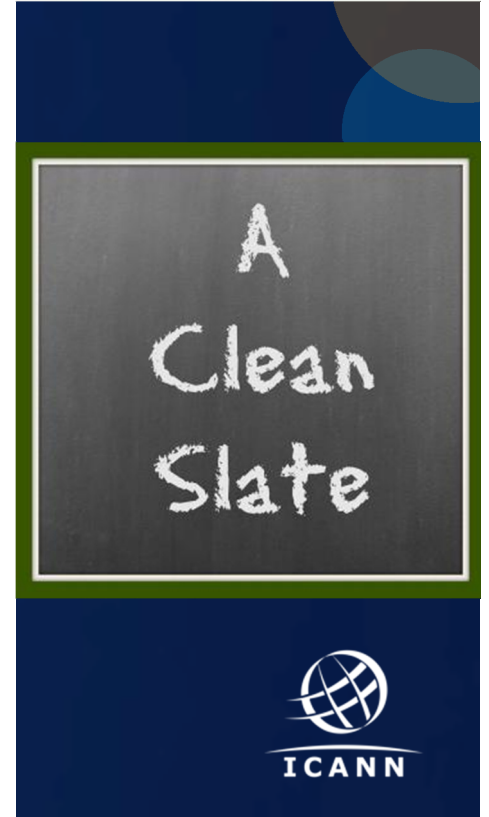
- About the EWG
- Overview of the EWG's Final Report
- Next Steps
- Extended Q&A Opportunities
 - EWG Final Report Discussion Session,
Monday, 23 June, 1700 - 1900
 - EWG Final Report Discussion Session,
Wednesday, 25 June, 0800 – 1000

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About the EWG

- Formed to overcome decade-long deadlock
 - Bring together a diverse group of volunteers
 - Apply wide range of expertise and experiences
 - Discuss issues frankly, participate individually
 - Strike compromises to find a path forward
- ICANN Board's mandate to EWG
 - Reexamine purpose & provision of gTLD registration data
 - Envision a next-generation solution to better serve global Internet community needs
 - Create a foundation to help the ICANN community (through the GNSO) create a new policy for gTLD directory services

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EWG Members



Jean-Francois Baril (Lead Facilitator)

Pekka Ala-Pietilä

Michele Neylon

Lanre Ajayi

Michael Niebel

Steve Crocker

Stephanie Perrin

Chris Disspain

Rod Rasmussen

Scott Hollenbeck

Carlton Samuels

Jin Jian

Faisal Shah

Susan Kawaguchi

Fabricio Vayra

Nora Nanayakkara

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EWG Approach

- Final Report reflects 15+ month effort
 - Thousands of hours on in-depth research
 - 2600+ pages of comments, responses, results
 - 19 public community consultations
 - 35 EWG meeting days
 - 42 EWG calls
 - More than 200 subteam calls
- All to answer a simple question

Is there an alternative to today's WHOIS to better serve the global Internet community?

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EWG's Answer:

Yes!

- Today's WHOIS model of giving every user the same entirely anonymous public access to often-inaccurate data should be abandoned.



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EWG's Final Report

- Details a proposed next-generation Registration Directory Service (RDS)
- Strikes a balance between accuracy, access, and accountability
- Collects, validates and discloses gTLD registration data for permissible purposes only
 - Leaves minimum data publicly available
 - Safeguards the rest through a new paradigm of purpose-driven gated access
- Introduces new contracted parties to
 - Validate Contact Data – improve accuracy
 - Accredite RDS Users – improve accountability



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Overview of Final Report

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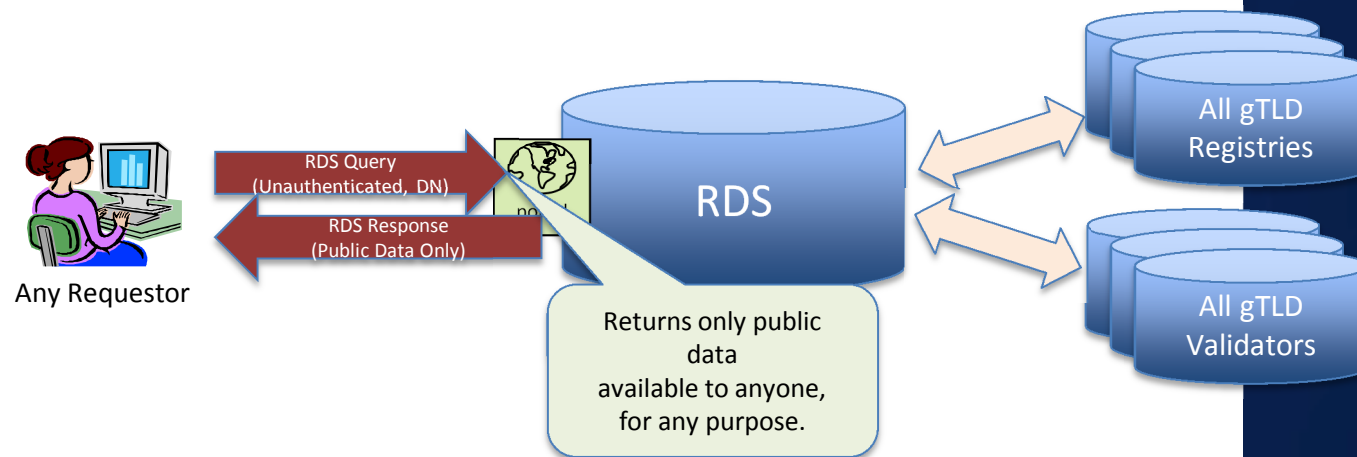
Public and Gated Data

- WHOIS provides one-size-fits-all public access to anonymous users
 - Little accountability or abuse remedies
 - Limited individual privacy protection or ability to conform to differing laws
 - Limited ability to ensure data integrity
 - Lack of security and auditing capabilities
 - Cumbersome contact management
 - Inefficient communication

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Solution: Gated Access

- Some registration data would remain public to promote Internet stability and meet basic DNS needs
- This minimum public data would still be accessible by anyone, for any purpose, without authentication...



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WHOIS vs. RDS Data

WHOIS Existing Domain Name Data Supplied by Registrar and Registry	Existing Registrant Data Collected from Registrant	Existing Admin, Tech Contacts
		Collected from Registrants & Used without Authorization

WHOIS Data

- Entirely Public Data
- Entirely Anonymous Access
- No Contact Authorization
- Few Registrant Options

RDS Data

- Minimum Public Data
- Most Data Gated by Default
- Purpose-Driven Access
- **Contacts Authorize Data Use**
- New Registrant Options

RDS Existing Domain Name Data Supplied by Registrar and Registry	Existing Registrant Data Collected from Registrant	Existing Admin, Tech Contacts
		New Abuse, Legal, Proxy, Business Contacts
	New Registrant Optional Data	Collected from & Authorized by Contacts

Minimum Public Data

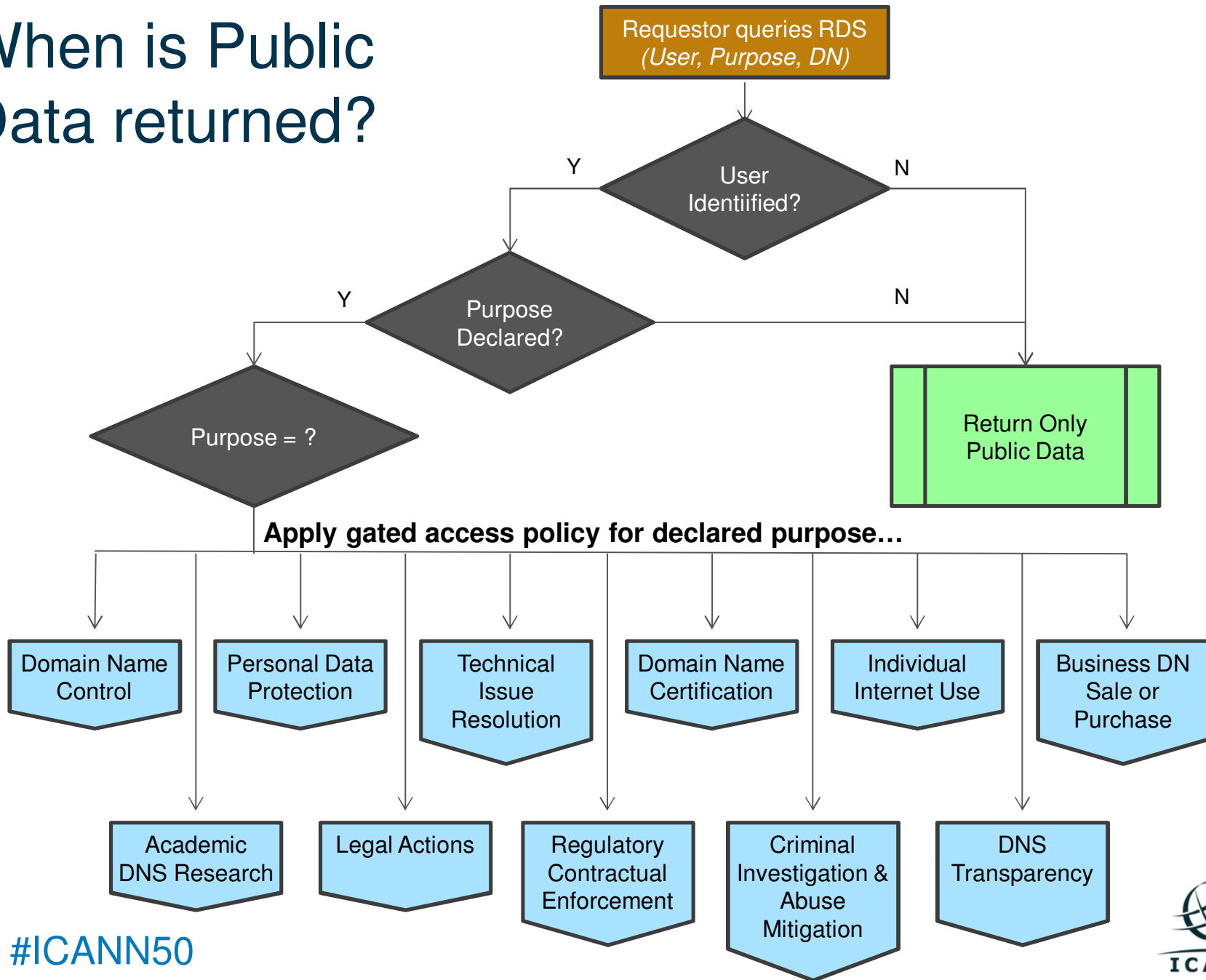
Registration Status: x	Domain Name: EXAMPLE.TLD
DNSSEC Delegation: signedDelegation	Name Server: NS01.EXAMPLE-REGISTRAR.TLD
Client Status: DeleteProhibited, RenewProhibited, TransferProhibited	Registrant Type: UNDECLARED
Server Status: DeleteProhibited, RenewProhibited, TransferProhibited	Registrant Contact ID: xxxx-xxxx
Registrar: EXAMPLE REGISTRAR LLC	Registrant Contact Validation Status: Operationally-Validated
Reseller: EXAMPLE RESELLER	Registrant Contact Last Validated Timestamp: x
Registrar Jurisdiction: EXAMPLE JURISDICTION	Registrant Email: EMAIL@EXAMPLE.TLD
Registry Jurisdiction: EXAMPLE JURISDICTION	Registrant Country: AA
Registration Agreement Language: ENGLISH	Administrator Contact ID: xxxx-xxxx
Creation Date: 2000-10-08T00:45:00Z	Tech Contact ID: xxxx-xxxx
Original Registration Date: 2000-10-08T00:45:00Z	Legal Contact ID: xxxx-xxxx
Registrar Registration Expiration Date: 2010-10-08T00:44:59Z	Abuse Contact ID: xxxx-xxxx
Updated Date: 2009-05-29T20:13:00Z	Business Contact ID: xxxx-xxxx
Registrar URL: http://www.example-registrar.tld	Privacy/Proxy Contact ID: xxxx-xxxx
Registrar IANA Number: 5555555	
Registrar Abuse Contact Email: email@registrar.tld	
Registrar Abuse Contact Phone: +1.1235551234	
URL of the Internic Complaint Site: http://wdprs.internic.net/	

Minimum[¥] registration data that is publicly available to anyone, for any purpose, without authentication*
(grey = not applicable for every domain name)

* Except where prohibited by data protection laws

¥ Gated Registrant Data can also be made Public at the Registrant's discretion

When is Public Data returned?



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What is the RDS “gate”?

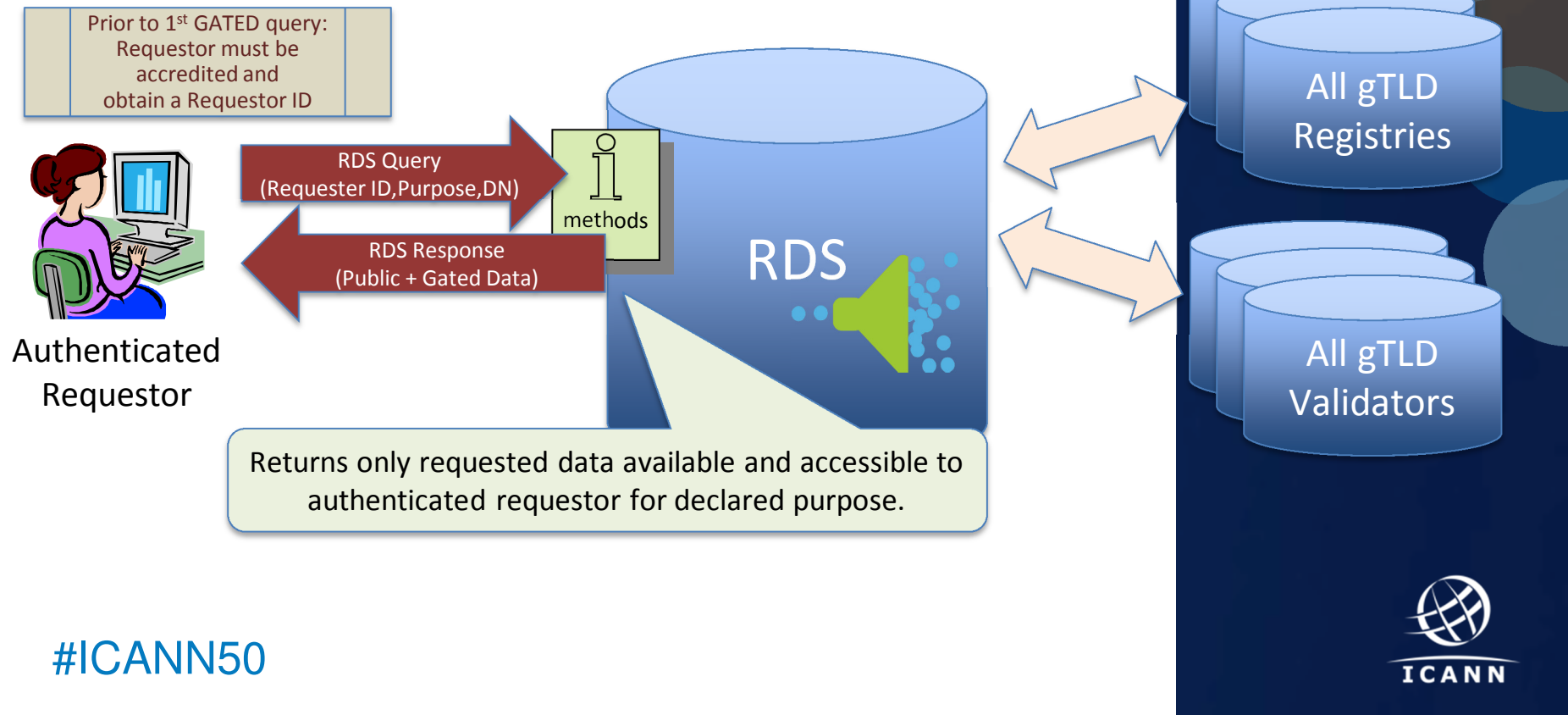
There is no single RDS “gate”

- Requestors and their data needs vary; so would gated access policies
- Like most on-line services that hold private data, the RDS would
 - Apply policy-defined permissions
 - Driven by requestor identity + purpose
 - Uniformly enforce terms of service
 - Apply measures to deter and mitigate abuse



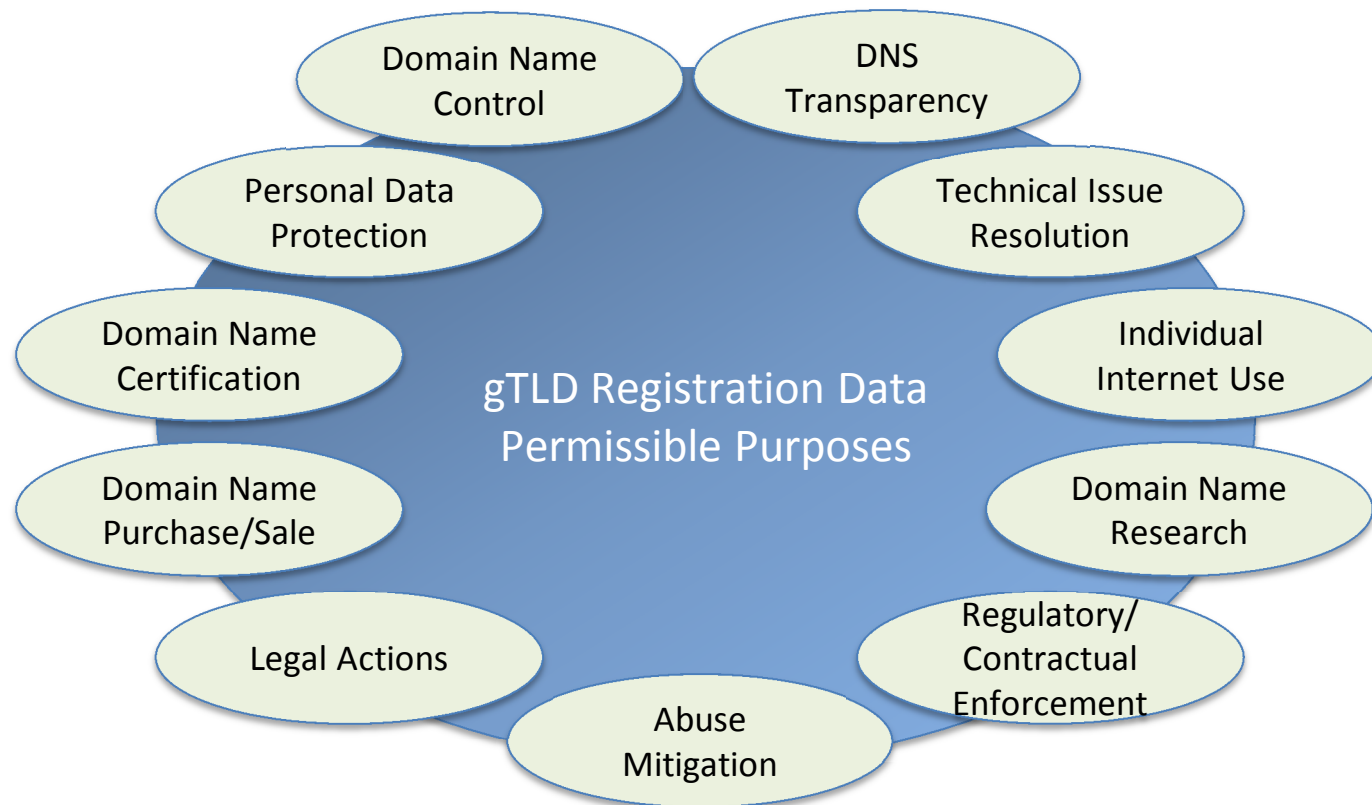
What is Purpose-Driven Access?

- In the RDS, data is collected and disclosed for permissible purposes



Accredited Users and Purposes

- The RDS must support existing and future permissible purposes



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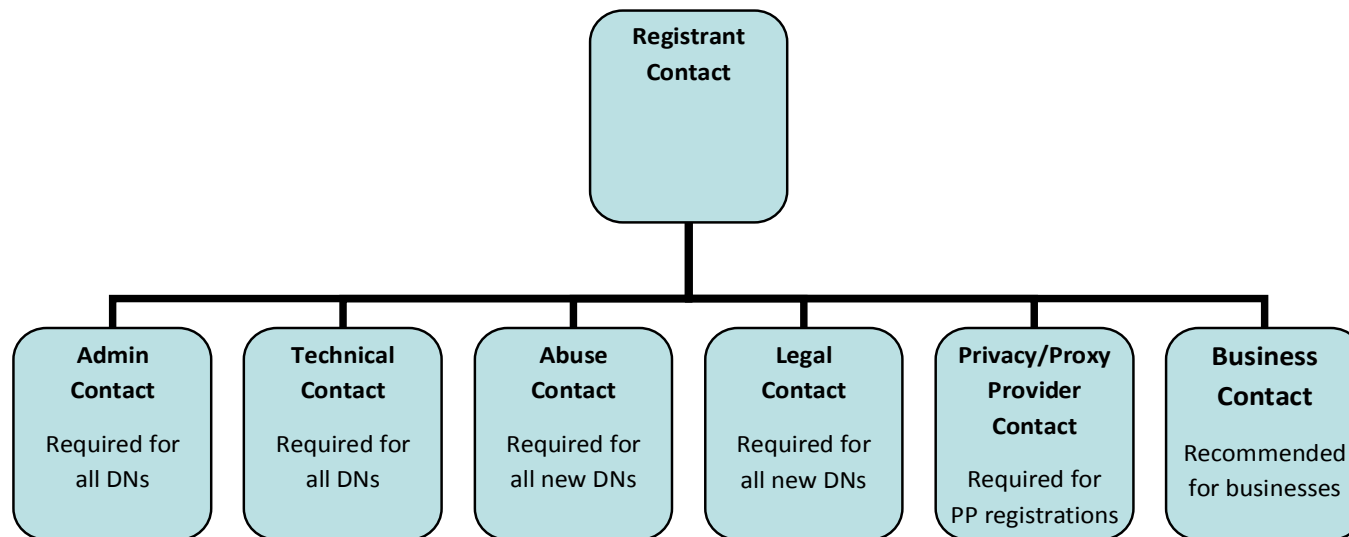
Purposes and Data

- Each purpose is tied to registration data needs
 - Domain names involved
 - Domain name data needed
 - Registrant data needed
 - Contact data needed
 - Other query needs (Reverse, WhoWas)
- Some purposes are widely used and satisfied by public data
- Other purposes require formal accreditation, strict terms of service, strong access controls, anti-abuse mechanisms, penalties for misuse



Purpose-Based Contacts

- Improve accountability and reachability while giving Registrants more control over personal data use
- Contact ID is public, assigned to each block of data
- Contact Data is gated, available to authenticated requestors with specific purpose who agree to be accountable for use (i.e., Terms of Service)



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PBCs can contain

- Designated third-party contact's data, authorized for use by domain name
- Forwarding addresses supplied by accredited Privacy Service
- Alternative addresses supplied by accredited Proxy Service
- Registrant's own contact data (if no other choice is made)
- Each PBC can choose to gate any addresses not essential for purpose



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Validation and Accuracy

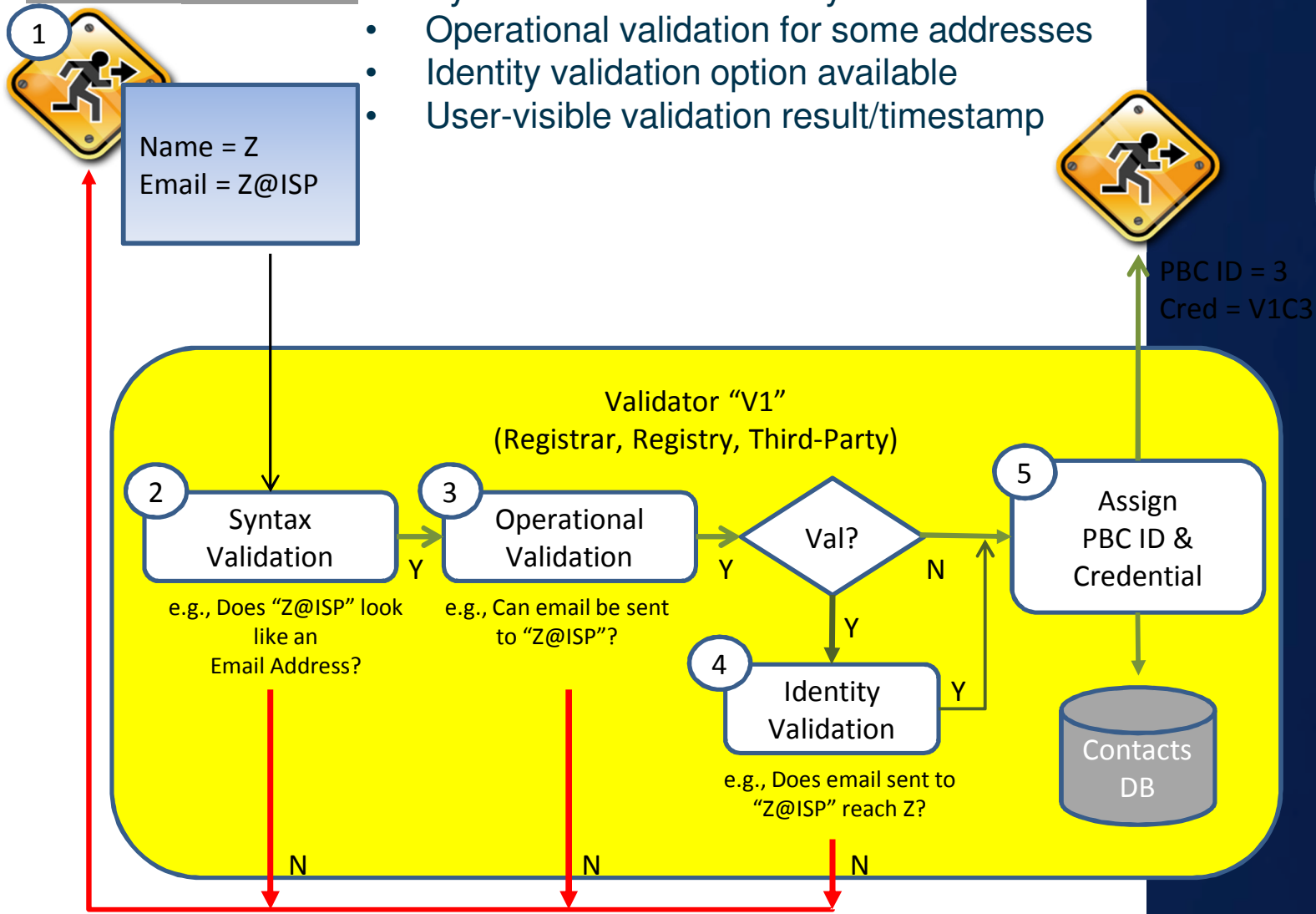
- The RDS improves data quality through
 - Reusable PBCs to improve reachability
 - Gated Access to decrease intentional inaccuracy
- And two further improvements
 - Standard validation of all gTLD registration data, at time of collection and periodically
 - Prevalidated Contact Directory, conceptually separate from Domain Name Directory

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Standard Validation

- Syntax validation for every data element
- Operational validation for some addresses
- Identity validation option available
- User-visible validation result/timestamp



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RDS Contact Directory

- In the RDS, Registrants and third parties create and maintain their own Contact data using a “Validator”
- By separating Contact Validation from Domain Name Registration
 - Difficult validation tasks can be carried out by specialists – many of whom already validate addresses on a global scale
 - Registrars and Registries won't be forced to create global validation systems
 - Registrants can choose local Validators, reducing overall cost



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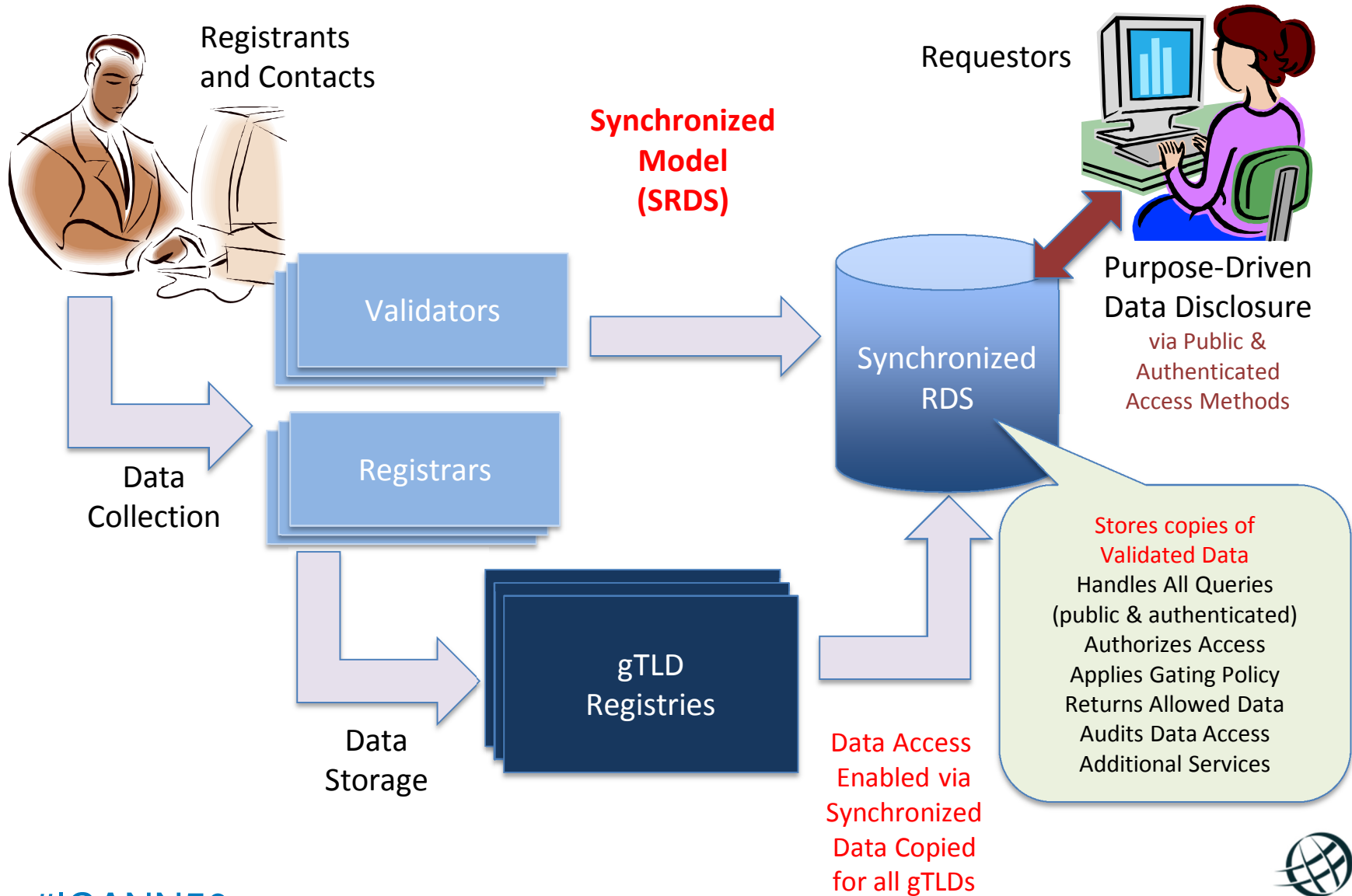
Recommended Model

- The EWG evaluated several possible models against defined criteria

POSSIBLE MODELS	Collection	Storage	Copy	Access
Current WHOIS	RR	RR/Ry	n/a	RR/Ry
Federated	RR & V	RR/Ry & V	n/a	RDS
Synchronized *	RR & V	RR/Ry & V	RDS	RDS
Regional	RR & V	RR/Ry & V	Regional	RDS
Opt-Out	RR & V	RR/Ry & V	Optional	RDS
Bypass	RR & V	RR & V	RDS	RDS

- After rigorous analysis of factors – including cost – the EWG chose the Synchronized RDS (SRDS)

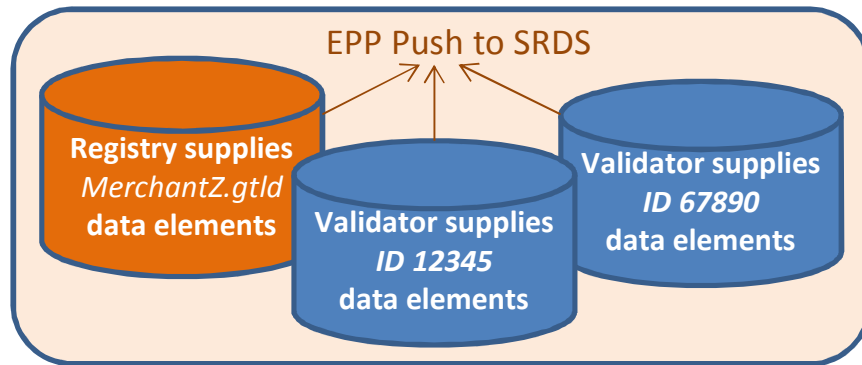
Synchronized RDS



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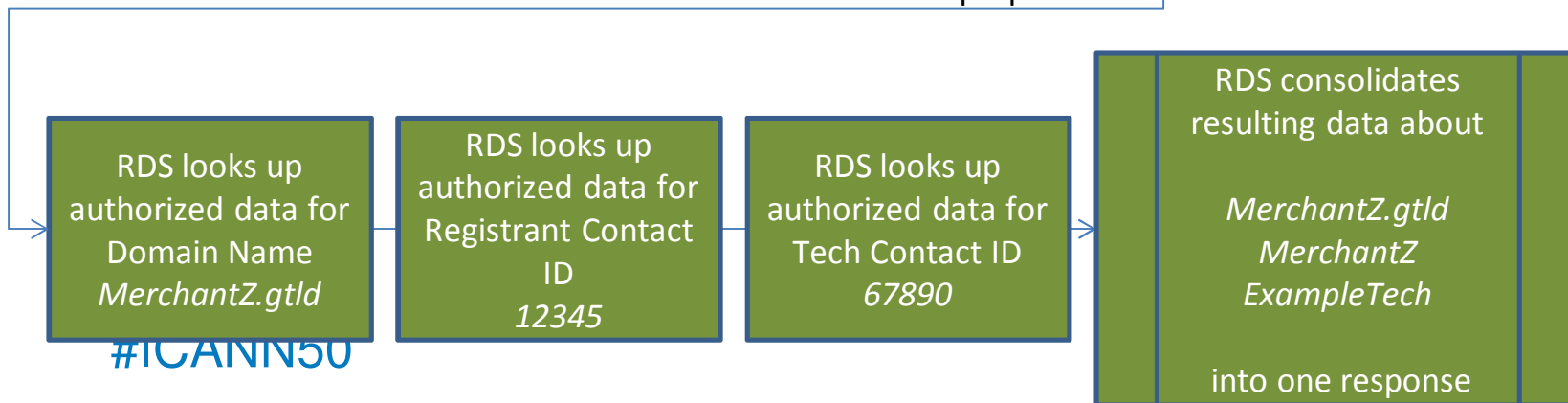
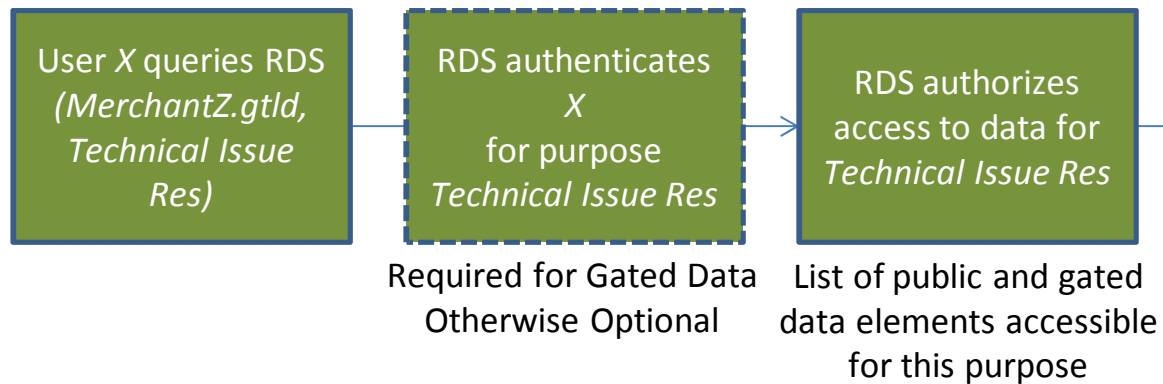


RDS Ecosystem



**Example #2 –
Querying SRDS about DN
for Technical Issue Resolution**

**(illustrates Synchronized
model)**



Data Protection

- In its work, the EWG was guided by some overarching legal principles

Personal data must be:

- processed lawfully, fairly and in a transparent manner in relation to the data subject,
- collected for specific, explicit and legitimate purposes and not further processed in a way incompatible with those purposes,
- adequate, relevant, and limited to the minimum necessary in relation to the purposes for which they are processed, and
- accurate and kept up-to-date as required for the specified purposes.

Lawful processing, including transfer and disclosure can be – subject to the relevant jurisdiction – based on:

- consent of the data subject,
- the necessity for the performance of a contract to which the data subject is party, and
- the necessity for compliance with a legal obligation to which the controller is subject.

A right of access to information and a right to rectify inaccuracy for the data subject have to be ensured.

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Data Protection Principles

- Mechanisms must be adopted to facilitate routine legally compliant data collection and transfer between actors within the RDS ecosystem
 - This challenge already exists for WHOIS, is rapidly growing, and will be exacerbated by new gTLDs
- Standard contract clauses that are harmonized with privacy and data protection laws should be codified in a policy and enforced through contracts between all RDS ecosystem actors handling personal data
- A “rules engine” to apply data protection laws and localization of RDS storage should be considered to implement a high level of data protection

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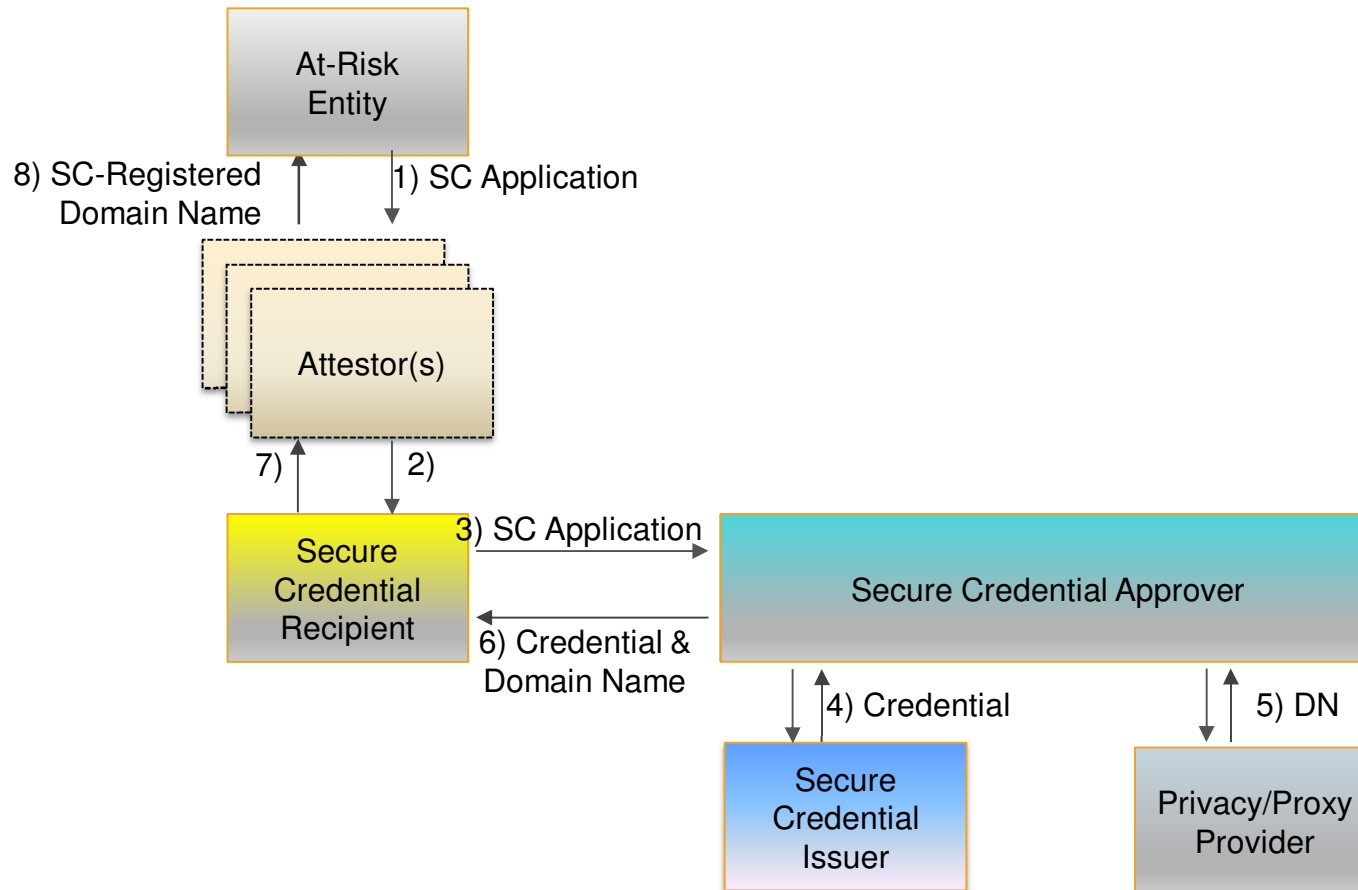
Privacy Principles

- In addition to the privacy afforded by compliance with data protection laws, the RDS ecosystem must accommodate needs for privacy by including:
 - An accredited Privacy/Proxy Service for general personal data protection and adherence to local privacy law; and
 - An accredited Secure Protected Credentials Service for persons at risk, and in instances where free-speech rights may be denied or speakers persecuted.
- There must be accreditation for Privacy/Proxy service providers and rules regarding the provision and use of accredited Privacy/Proxy services.
- Outside of domain names registered via accredited Privacy/Proxy services, all Registrants must assume responsibility for the domain names they register.

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Secure Protected Credentials



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Other Topics in Final Report

- Data Element Principles
- RDS User Accreditation
- Law Enforcement Access
- Compliance and Contractual Relationships
- Accredited Privacy and Proxy Service Principles
- Model Design Principles and Cost Analysis
- Data Storage, Escrow, and Logging Principles
- Benefits compared to WHOIS under 2013 RAA
- Preliminary discussion of RDS Risk and Impacts

<https://www.icann.org/en/system/files/files/final-report-06jun14-en.pdf>

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Conclusion

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Next Steps

- EWG to offer webinars and other opportunities for Community Q&A
- ICANN Board to consider EWG's Final Report as foundation for the Board-requested GNSO Policy Development Process (PDP)
- Fundamental questions to consider
 - Is the RDS preferable to today's WHOIS?
 - If not, can WHOIS meet the needs of the evolving global Internet?

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Questions?

- **EWG Discussion Sessions**
 - Monday, 23 June, 1700 - 1900
 - Wednesday, 25 June, 0800 – 1000
- **Where EWG members will**
 - Discuss key RDS concepts
 - Answer your questions

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Background Materials

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Additional Resource Links

- **EWG Public Wiki**
<https://community.icann.org/pages/viewpage.action?pagelD=40175189>
- **Initial Report Announcement**
<https://www.icann.org/news/announcement-3-2013-06-24-en>
- **Status Update Report Announcement**
<https://www.icann.org/news/announcement-2013-11-11-en>
- **Final Report Announcement**
<https://www.icann.org/news/blog/ewg-recommends-a-replacement-for-whois>
- **Public Research Page**
<https://community.icann.org/display/WG/EWG+Public+Research+Page>