

Exploring Replacements for WHOIS – A Next Generation Registration Directory Service (RDS)

EWG Consultation with the ICANN Community

Wednesday 20 November, 2013



Registration Directory Service (RDS) Session Agenda

- + Introduction
- + RDS Overview
- + Next Steps
- + Q&A



Introduction: Mandate and Purpose



- + ICANN Board directives
 1. Implement WHOIS Review Team recommended improvements
 2. Redefine the purpose and provision of gTLD registration data
- + Expert Working Group (EWG) was formed to address the latter by
 - Assessing the needs for a Next Generation Registration Directory Service (RDS)
 - Recommending a clean-slate approach

EWG Members



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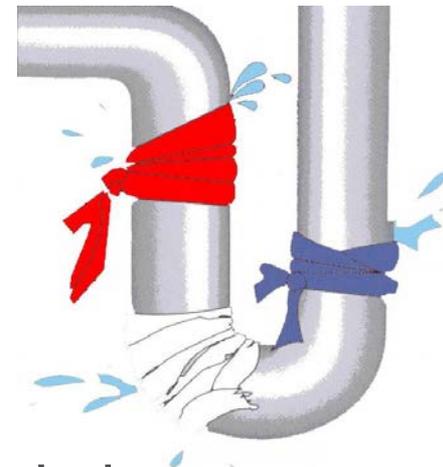
What's happened so far?

- + Initial Report published on 24 June
- + Recommended paradigm shift
 - Abandon one-size-fits-all WHOIS approach
 - Create new purpose-driven RDS to improve privacy, accuracy & accountability
- + Community consultations in Beijing and Durban, and via public comment and on-line survey
- + Status Update Report published on 11 Nov



<http://www.icann.org/en/news/announcements/announcement-11nov13-en.htm>

Why replace WHOIS?



- + Despite recent improvements, significant deficiencies still exist:
 - Anonymous public access fosters mining and abuse, with little accountability or ability to remedy
 - Unacceptable accuracy levels creates inefficiencies for those seeking to communicate with registrants
 - **Limited ability to:**
 - Protect privacy of individuals
 - Ensure integrity of data
 - Conform to differing privacy regimes
 - **Lack of:**
 - Security features or auditing capabilities

Requirements for a Next-Generation RDS



- + Based on analysis of users and purposes, the EWG recommended **design principles**

Applicability	Data Elements
International Considerations	Access Methods
Accountability	Validation and Accuracy
Privacy Considerations	Standard Validation Service
Permissible Purposes	Contractual Relationships
Data Disclosure	Storage and Escrow

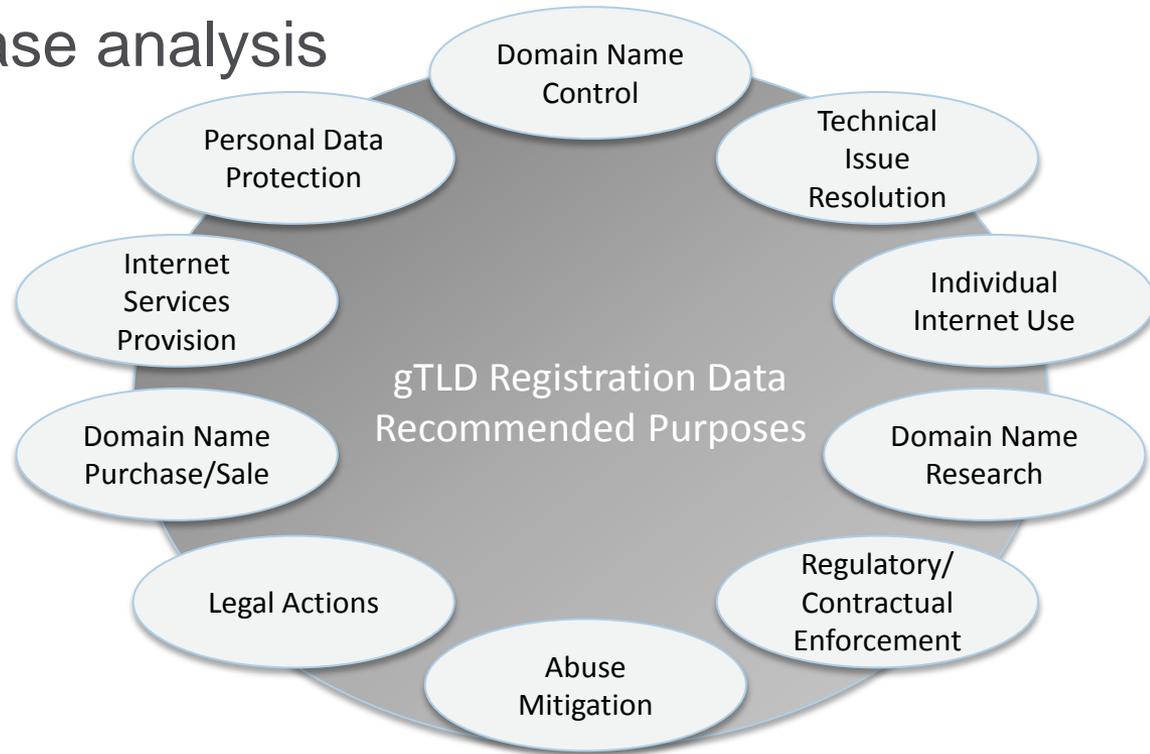
- + **Goal:** Facilitate and focus policy discussions for an issue that has been contentious for 10+ years

RDS Users and Purposes

+ Based on use case analysis

REGISTRATION DATA USERS

- ✓ All Registrants
- ✓ Protected Registrants
- ✓ Internet Tech Staff
- ✓ On-Line Service Providers
- ✓ Individual Internet Users
- ✓ Business Internet Users
- ✓ Intellectual Property Owners
- ✓ Internet Researchers
- ✓ LEA/OpSec Investigators
- ✓ Non-LEA Investigators
- ☒ Bad Actors



+ Initial list for discussion and refinement

+ Processes and policies required to add new users and purposes over time, as the Internet evolves

Recommended Design Principles – Accountability

- + All parties in the domain name ecosystem have responsibilities
 - Domain name registration and use
 - Current, accurate, timely registration data
 - Reachable for timely resolution of domain name problems
 - Repercussions for misusing registration data or providing inaccurate data



Recommended Design Principles – Data Elements



- + Purpose-based data collection
- + Data needed for identified purpose(s) to be provided by registrants, registrars, and registries
 - Collected by registrars
 - Stored by registries
- + Criteria recommended for which data elements should be mandatory or optional
 - Sample RDS data records given to illustrate principles
 - Allows for extensibility
 - Risk assessment recommended

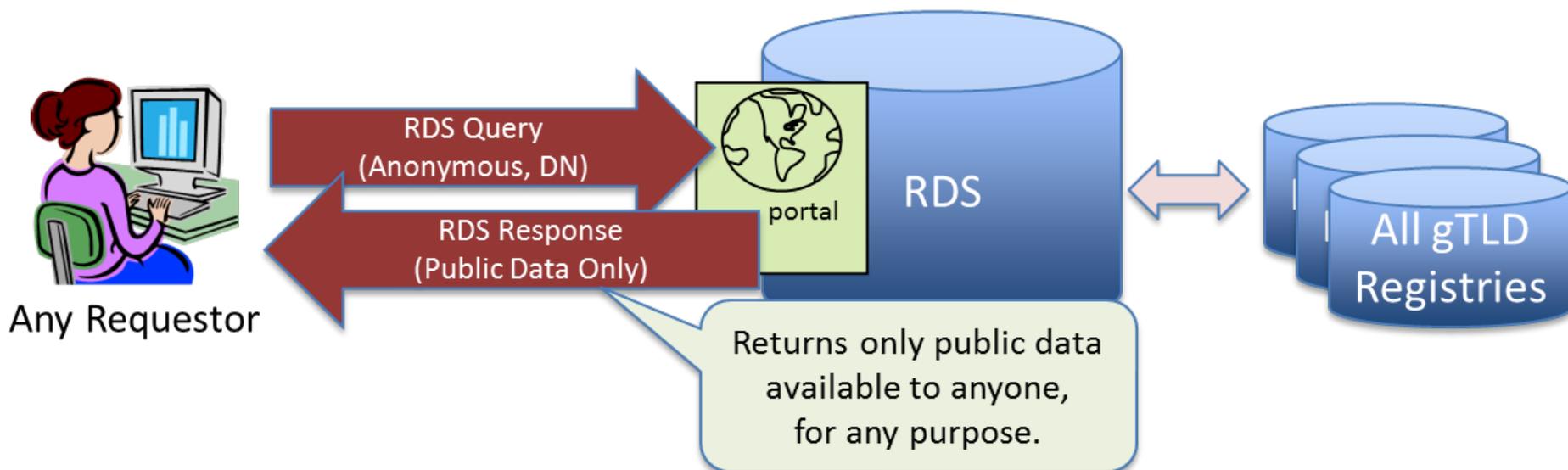
Recommended Design Principles – Validation and Accuracy



- + Applicant submits contact data through Validator of his/her choice (e.g., registrar, registry, 3rd party)
- + Validator performs syntactic, operational, and (optional) identity validation on contact data
 - At time of collection
 - When any update is made
 - Periodic, time-stamped accuracy audits
- + Creates pre-validated reusable contacts for
 - Domain name registrant contact
 - Role-based contacts for registered domain names

Recommended Design Principles – Data Disclosure

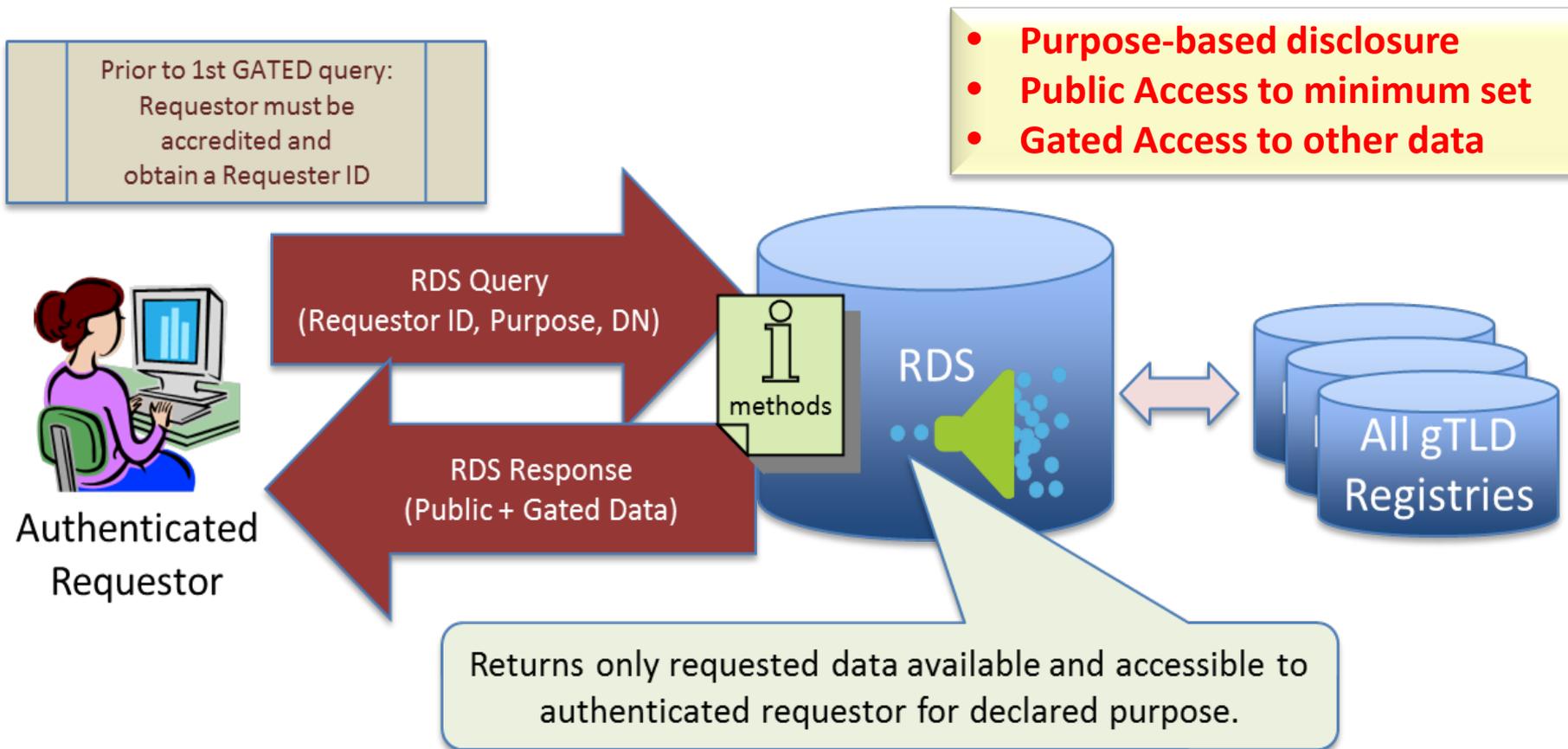
Anonymous Public Registration Data Access via RDS



- Purpose-based disclosure
- Public Access to minimum set
- Gated Access to other data...

Recommended Design Principles – Data Disclosure

Gated Data Access via RDS



Sample RDS Record

Registry or Registrar Source	Registrant Source	Optional Role Based Contacts
Registration Status DNSSEC Delegation Client Status Server Status Registrar Reseller Registrar Jurisdiction Registry Jurisdiction Registration Contract Language Creation Date Original Registration Date Registrar Registration Expiration Date Updated Date Registrar URL Registrar IANA Number Registrar Abuse Contact Email Registrar Abuse Contact Phone URL of the Internic Complaint Site	Domain Name Name Server Registrant Name Registrant Type Registrant Contact ID (issued by RDS-accredited Validator) Registrant Organization Registrant Company Identifier Registrant Email Registrant Street Registrant City Registrant State/Province Registrant Postal Code Registrant Country Registrant Phone Registrant Phone Ext Registrant Fax Registrant Fax Ext Registrant SMS	Contact Name Contact Role Contact ID Contact Organization Contact Street Contact City Contact State/Province Contact Postal Code Contact Country Contact Phone Contact Phone Ext Contact Email Contact Fax Contact Fax Ext Contact SMS

KEY: Bold Elements Always Public/**Rest May Be Gated**
 Shaded Optional to Collect/**Rest mandatory to Collect**

Recommended Design Principles – Access Methods



- + Disclosures only through defined access methods
 - For consistency, central point of access
 - Public data via anonymous query (e.g., website)
 - Gated data via other access multi-modal methods
- + To deter misuse and promote accountability
 - Access should be authenticated to appropriate level
 - Accreditation of requestors needing gated access
 - If terms and conditions violated, penalties may be applied
- + Use existing/emerging protocols: EPP and RDAP

Recommended Design Principles – Privacy Considerations



- + RDS should accommodate needs for
 - Enhanced Protected Registration Service for general personal data protection and adherence to privacy laws
 - Maximum Protected Registration Service for at-risk users
- + Proposed principles and processes for accredited
 - Shield (formerly Privacy) and Proxy Service Providers
 - Secured Protected Credentials System
- + RDS must address data residency and impact on collection, access and transfer operations
 - Consideration of Binding Corporate Rules to achieve this

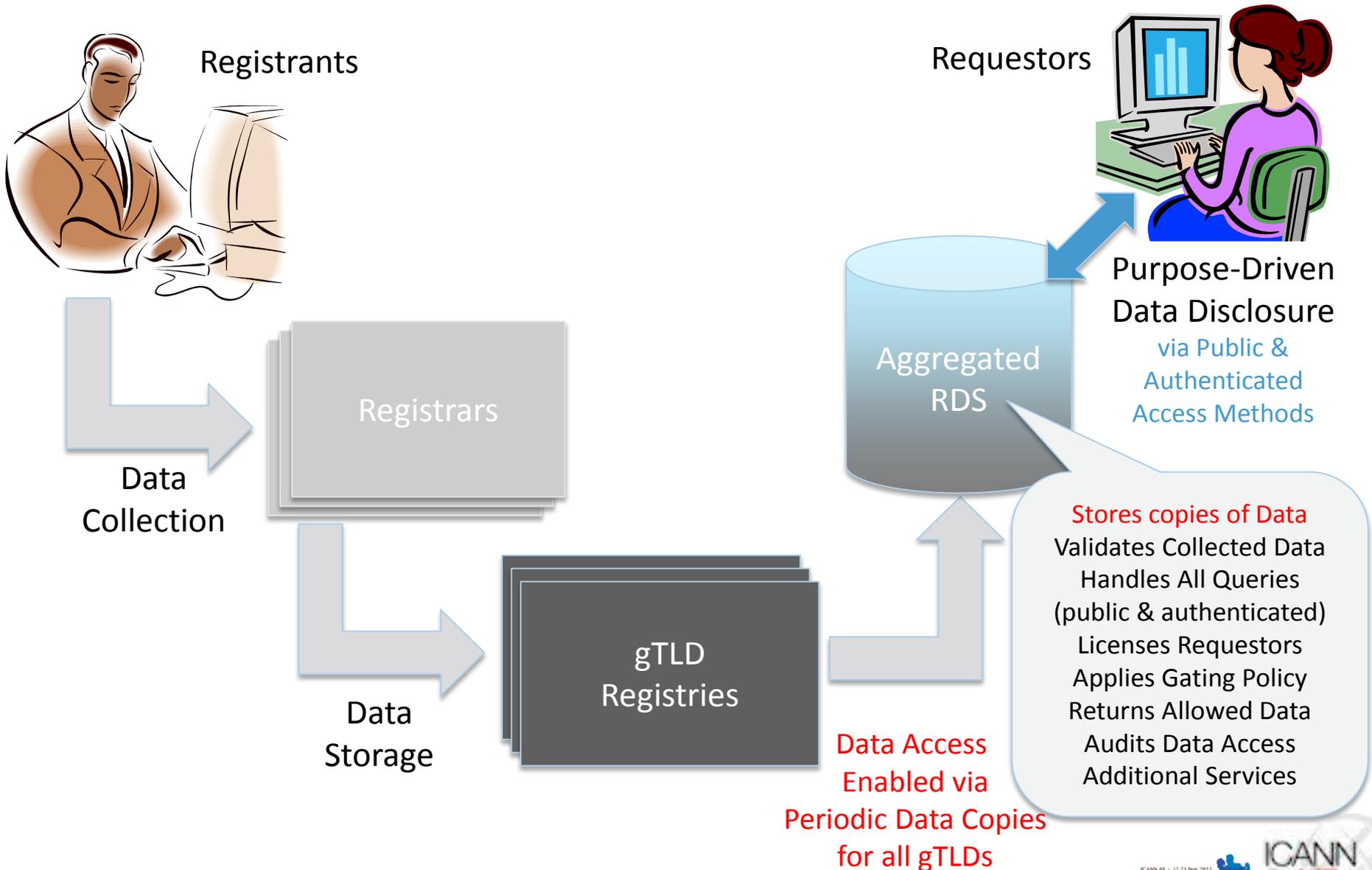
Support for Design Principles – Suggested System Models

- + EWG examined several possible models
- + Models differ in the way that data would be copied to or queried through the RDS

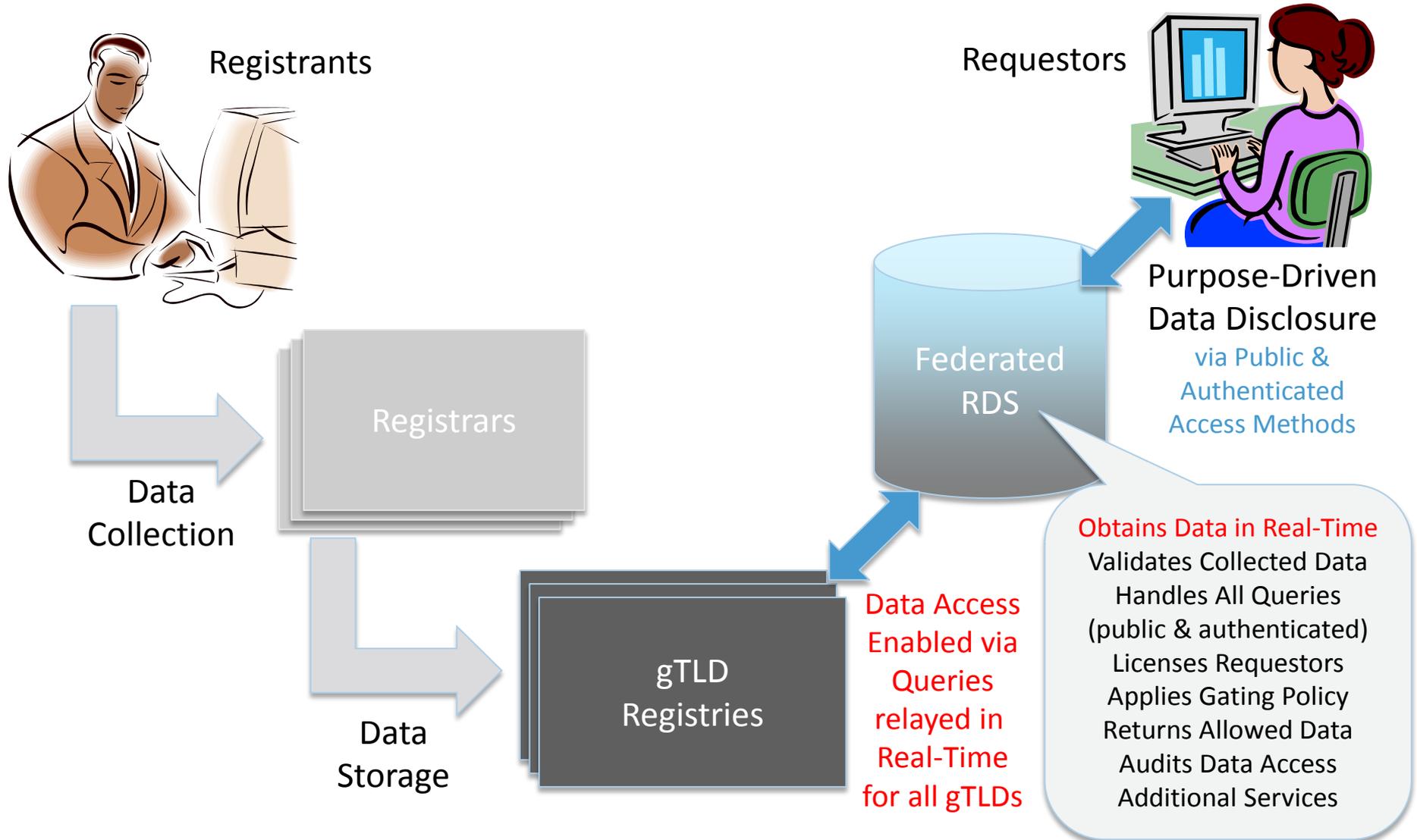
POSSIBLE MODELS	Collection	Storage	Copy	Access
Current Whols	RR	RR/Ry	n/a	RR/Ry
Federated	RR	RR/Ry	n/a	RDS
Aggregated	RR	RR/Ry	RDS	RDS
Regional	RR	RR/Ry	Regional	RDS
Opt-Out	RR	RR/Ry	Optional	RDS
Bypass	RR	RR	RDS	RDS

- + All except current WHOIS could satisfy recommended design principles to some degree
- + Focused analysis on two most promising models

Aggregated RDS (ARDS)



Federated RDS



Analysis of Jurisdictional Concerns and Applicable Law



- + EWG exploring mechanisms for accommodating jurisdictional concerns
- + *Jurisdictional concerns are not unique to RDS*
 - Prior to new gTLDs, gTLD registration data stored by registries in a few jurisdictions
 - With new gTLDs, potential conflicts of applicable law are magnified exponentially
 - Current WHOIS waiver process unlikely to scale
- + **Binding Corporate Rules** suggested as potential solution
 - Minimum Baseline to be considered (e.g. EU Data Directive)

Next Steps for the EWG



+ **Dialog** with Community at ICANN 48

+ **Research Phase**

- ccTLD and commercial validation practices
- Organizations to accredit RDS users
- Risk/impact and detailed cost analysis
- Proxy practices

+ **Final Deliberations**

- + **Early 2014** WG reconvenes to examine research results and comments received
- + **After ICANN 49** Final Report to the ICANN Board for consideration and follow-up

Be part of the solution!



- + Exchange ideas during an [interactive open EWG Workshop](#) on Wednesday, 20 Nov, 16:30-17:30 ART
- + Submit your ideas to the EWG's Public Mailbox input-to-ewg@icann.org until 31 Jan 2014
- + View comments and responses linked to: <http://www.icann.org/en/groups/other/gtld-directory-services/share-24jun13-en.htm>



Discussion Questions

<http://buenosaires48.icann.org/en/schedule/wed-ewg/presentation-rds-discussion-14nov13-en>



+ Improving accountability

- Does proposed data collection/disclosure criteria strike an **appropriate balance**?
- Must **legal persons** make more data public?
- What organizations might **accredit RDS users** who need **gated data access**?

+ Improving quality

- Would **validation** proposals address the causes of inaccurate WHOIS data?
- Benefits, limitations, impacts of **reusable contacts**?

Discussion topics



+ Improving privacy

- Would proposed **Shield and Proxy** principles and processes overcome known deficiencies?
- How could a **Secure Protected Credentials** approach be operationalized?

+ Jurisdictional considerations

- Would **Binding Corporate Rules** be the best way to address concerns about jurisdiction and applicable law?

PRO

CON



+ Possible system models

- Have the most **viable models** been vetted and have all **important criteria** been considered?
- For the Aggregated and Federated models, are there significant **pros and cons** not yet considered?

+ Support from technical protocols

- Why are **EPP and RDAP** well-suited for next-generation RDS access and display?
- What circumstances would render these ineffective?



Other Questions or Comments?

How to Learn More



- + Buenos Aires Public Session Recording
<http://buenosaires48.icann.org/en/schedule/wed-rds>
- + Initial Report Announcement
<http://www.icann.org/en/news/announcements/announcement-3-24jun13-en.htm>
- + Status Update Report Announcement
<http://www.icann.org/en/news/announcements/announcement-11nov13-en.htm>
- + Public Comment Responses
<http://www.icann.org/en/groups/other/gtld-directory-services/summary-response-initial-12nov13-en.pdf>
- + Calls, briefings, meetings upon request

