



# New gTLD Program Explanatory Memorandum

## gTLD Registry Transition Processes Model

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### Background – New gTLD Program

Since ICANN was founded ten years ago as a not-for-profit, multi-stakeholder organization dedicated to coordinating the Internet's addressing system, one of its foundational principles, recognized by the United States and other governments, has been to promote competition in the domain-name marketplace while ensuring Internet security and stability. The expansion of the generic top-level domains (gTLDs) will allow for more innovation, choice and change to the Internet's addressing system, now represented by 21 gTLDs.

The decision to introduce new gTLDs followed a detailed and lengthy consultation process with all constituencies of the global Internet community represented by a wide variety of stakeholders – governments, individuals, civil society, business and intellectual property constituencies, and the technology community. Also contributing were ICANN's Governmental Advisory Committee (GAC), At-Large Advisory Committee (ALAC), Country Code Names Supporting Organization (ccNSO), and Security and Stability Advisory Committee (SSAC). The consultation process resulted in a policy on the introduction of New gTLDs completed by the Generic Names Supporting Organization (GNSO) in 2007, and adopted by ICANN's Board in June, 2008.

This explanatory memorandum is part of a series of documents published by ICANN to assist the global Internet community in understanding the requirements and processes presented in the Applicant Guidebook, currently in draft form. Since late 2008, ICANN staff has been sharing the program development progress with the Internet community through a series of public comment fora on the applicant guidebook drafts and supporting documents. To date, there have been over 250 consultation days on critical program materials. The comments received continue to be carefully evaluated and used to further refine the program and inform development of the final version of the Applicant Guidebook.

For current information, timelines and activities related to the New gTLD Program, please go to <http://www.icann.org/en/topics/new-gtld-program.htm>.

Please note that this is a discussion draft only. Potential applicants should not rely on any of the proposed details of the new gTLD program as the program remains subject to further consultation and revision.

## Summary of Key Points in this Paper

- Core value #1 of the ICANN bylaws states that preserving and enhancing the operational stability, reliability, security, and global interoperability of the Internet should guide ICANN's decisions and actions. In pursuit of this principle and as a result of the development of the Registry Continuity Framework, ICANN has identified the need to define processes to transition a gTLD from one registry operator to another.
  - To protect registrants the processes will:
  - Ensure registry services are operational to the greatest extent possible and;
  - Make sure a new registry operator is evaluated using the appropriate level of scrutiny to maximize the chance of success in the operation of the transitioned gTLD.
- The following three processes have been developed and are described in this document:
  1. Registry Transition Process with proposed successor to be used primarily when the current registry has identified a successor registry.
  2. Registry Transition Process with Request for Proposals to be used primarily when the current registry is terminated and there is no successor registry identified.
  3. Emergency Back-End Registry Operator Temporary Transition Process to be used when one of the Critical Functions (DNS, DNSSEC, Whois, SRS/EPP, Data Escrow) is performing below a defined emergency threshold and requires temporary replacement.
- These processes will ensure that a transition occurs in a secure, stable and reliable manner, while minimizing the impact on registrants and gTLD users, and providing transparency to the parties involved in the transition.
- Processes 1 and 2 will also be used if at the end of the registry agreement term, or by means of a court order by a legal authority with jurisdiction the relevant Government or Public Authority withdraws its support for the registry of a gTLD representing a geographic name.

## Definitions

For purposes of this document the following terms are defined as follows:

**Back-End Registry Operator:** An organization contracted by a registry to run one or more of the Critical Functions of a gTLD registry.

**Critical Functions:** Functions that are critical to the operation of a gTLD registry:

1. DNS resolution
2. DNSSEC properly signed zone (if DNSSEC is offered by the registry)
3. Shared Registration System (SRS), usually by means of the Extensible Provisioning Protocol (EPP)
4. Registration Data Publication Service, usually by means of the Whois protocol
5. Registry Data Escrow

**Registry Transition:** A change in the contracting party of a gTLD Registry Agreement with ICANN. Examples of circumstances leading to a Registry Transition are: name change of the organization running the gTLD, a sale or transfer of the registry, current registry is in breach of Registry Agreement, etc.

**Successor Registry:** The new contracting party of a gTLD Registry Agreement with ICANN after a Registry Transition.

## Registry Transition Processes

Affirmation of Commitments, section 9.2, states as one the commitments of ICANN:

*Preserving security, stability and resiliency [of the DNS].<sup>1</sup>*

ICANN bylaws identify the core values of the organization. Core value #1 is as follows:

*Preserving and enhancing the operational stability, reliability, security, and global interoperability of the Internet.<sup>2</sup>*

The 2006-2007 ICANN Operating Plan (section 1.1.2) states that ICANN will:

*Establish a comprehensive plan to be followed in the event of financial, technical, or business failure of a registry operator, including full compliance with data escrow requirements and recovery testing.<sup>3</sup>*

The process was created in FY06-07 and has been continuously updated; it is now called the Registry Continuity Framework<sup>4</sup>. The Incident and Event Management Process depicted in the Registry Continuity Framework identifies the need for handling situations where Critical Registry Functions are negatively affected.

In pursuit of its core value #1, and as a result of the development of the Registry Continuity Framework, ICANN has identified the need to define processes to transition a gTLD in a secure, stable and reliable manner; while minimizing the impact on registrants and gTLD users, and providing transparency to the parties involved in the transition.

The following three processes have been developed and are described in this document:

1. Registry Transition Process with proposed successor
2. Registry Transition Process with Request For Proposals (RFP)
3. Emergency Back-End Registry Operator Temporary Transition Process

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<sup>1</sup> ICANN. (2009, September 30). *Affirmation of Commitments*. Retrieved from

<http://www.icann.org/en/documents/affirmation-of-commitments-30sep09-en.htm>

<sup>2</sup> ICANN. (2009, September 30). *ICANN bylaws*. Retrieved from [http://www.icann.org/en/general/bylaws.htm#](http://www.icann.org/en/general/bylaws.htm#/)

<sup>3</sup> ICANN. (2006, June 22). *2006-2007 ICANN Operating Plan*. Retrieved from <http://www.icann.org/announcements/operating-plan-22jun06.htm>

<sup>4</sup> ICANN. (2009). *gTLD Registry Continuity*. Retrieved from <http://www.icann.org/en/registries/continuity/>

## 1. Registry Transition Process with Proposed Successor

This process will be used when a registry requests that ICANN assign its Registry Agreement to a prospective successor (e.g., the registry is being acquired, there is a name change in the organization, a transition to the registry services continuity provider). This process will also be used if at the end of the registry agreement term, or by means of a court order by a legal authority with jurisdiction, the relevant Government or Public authority withdraws its support to the registry operator of a gTLD that is a geographic name, and proposes a successor registry. A flowchart of this process is in Appendix 2.

The appropriate level of scrutiny will be exercised at all times when evaluating the proposed successor. For example, in the case of a name change, the evaluation will focus on ensuring it is legitimate to guarantee there is no opportunity for hijacking the TLD.

Upon receipt of the request from the current registry or relevant government or public authority (in the case of geographic gTLDs), ICANN will assess the situation from the gathered facts, conversations with the current registry, and government or public authority (if applicable), and an analysis of the Registry Agreement. The assessment will focus on the following questions:

- Would there be a change in an entity providing any of the Back-End Registry functions?
- Does the TLD have a relevant community that must be consulted?
- Is this a gTLD a geographic name according to the definition in the Applicant Guidebook? (Or, was government support required at the time of the application?)
- Are there any restrictions in the Registry Agreement that might affect a transition?

ICANN will also perform a risk assessment of the gTLD, current registry, and Back-End Registry Operator (if there is a change in that respect). The assessment will focus on particularities of the triple as a whole and the triplets themselves. For example, it will be checked if the gTLD is heavily used by financial institutions or for electronic commerce, which may lead to stricter measures about the security of the transition.

After these assessments are complete, the proposed successor registry will be checked to ensure that it has the required outside support, if that is appropriate. If the gTLD is a geographic name, as defined in the New gTLD Applicant Guidebook, ICANN will direct the proposed successor to solicit the relevant government or public authority for support for the prospective successor and collect documentation of support/non-objection. If the Registry Agreement defines any community that must be consulted at time of transition, ICANN will consult them at this stage. In these cases, there must be support for the proposed successor from the relevant community for the process to continue to transition.

If the proposed successor has the required support or if no support is required, ICANN will then proceed to evaluate the applicant using the processes defined in the Applicant Guidebook for new gTLDs. Based on criteria set forth in the **Prospective Registry Evaluation Matrix** described in Appendix 1, ICANN will determine which evaluations are necessary and collect the information and evaluation fee. The fee will cover the cost of the evaluations that are conducted by external providers.

Evaluations performed internally by ICANN will be at no cost for the applicant.

The scope of the evaluations will vary for each case depending on the required and appropriate level of scrutiny. The three levels of scrutiny are presented in Appendix 1. The most extensive level (i.e., *Full*) will be similar in scope to the review of new gTLD applicants. The assessment will be performed by one of the firms engaged in evaluating applications for new gTLDs. The next level (i.e., *Limited*) represents a more narrow scope of review. For example, the Technical and Operations evaluation could consist of ensuring that the new organization has similar arrangements in place with the existing Back-End Registry Operator. The third level (i.e., *Minimal*) represents a very narrow scope of review that would be performed internally by ICANN.

The evaluation provider will then perform the required evaluations and provide a report to the applicant and ICANN. If the applicant did not pass the evaluation, there will be a chance for the applicant to cure the deficiencies within three weeks of the failed evaluation (an extended evaluation). If the applicant does not pass evaluation in the second opportunity, the process will end with no transition and a refund will be provided to the applicant equal to what was collected less actual evaluation costs.

If the prospective successor has passed the evaluation, ICANN will seek the necessary approvals and enter into a Registry Agreement with the successor if approved. If the prospective successor is not approved, the process will end without transition.

Once the successor has been approved, this outcome will be communicated internally and externally as necessary and appropriate. If the transition does not involve a change in Back-End Registry Operator, the successor must then request the change in sponsoring organization with IANA.

If there is a change in the entity providing Back-End Registry Operator services, the successor will have to pass pre-delegation testing as defined in the Applicant Guidebook for new gTLDs. This is the case whether the Back-End provider is the Registry Operator or a contractor to the Registry Operator. Once the testing is successfully completed, the new registry must proceed to change the sponsoring organization with IANA in the IANA root zone database. After the IANA step has been completed, the successor registry will then carry out the migration of data and services, and will request changes to DNS and Whois records with IANA.

The final steps in the transition process will be to communicate internally and externally as necessary and appropriate and for ICANN to update its public and internal information about the gTLD registry.

## 2. Registry Transition Process with RFP

This process will be used primarily when a gTLD registry is in uncured breach of its Registry Agreement (leading to termination) and does not identify a successor registry. This process will also be used if at the end of the registry agreement term, or by means of a court order by a legal authority with jurisdiction, the relevant Government or Public Authority withdraws its support to the registry of a geographic gTLD and does not provide a proposed successor registry. A flowchart of this process is in Appendix 3.

This process is similar to a **Registry Transition Process with proposed successor** described above, except that it includes a Request for Proposals (RFP) subprocess. The purpose of the RFP is to identify and solicit applications from prospective, successor registries.

The RFP process will be launched following the risk assessment of the gTLD, as it may produce findings that might be important to disclose in the RFP. The RFP will describe the necessary services to be provided by the successor registry. In addition, expected costs



for evaluation services will be included in the RFP and will serve as the minimum acceptable economic proposal from an applicant.

If the registry is operating a gTLD that is a geographic name, as defined in the Applicant Guidebook, ICANN will consult with the relevant Government or Public Authority for their input in the RFP. Further, if the Registry Agreement contains a provision that requires ICANN to consult with a specified community about a potential successor before a transition, it will be done at this stage in the process.

Once the RFP has been approved, it will be posted for 45 days, and applicants will have until the end of the posting period to provide a response.

The applicant proposing the highest payment to the original registry will then be checked for necessary support and will be evaluated as described in the **Registry Transition process with proposed successor**. This selection mechanism provides the maximum return for the original registry and minimizes unnecessary expenses for the non-winner applicants while still ensuring the winner is qualified.

If the applicant has the necessary support (or if no support is required) and passes the evaluation, the process will continue as described in the aforementioned process. If the applicant does not have the required support or does not pass the evaluation, the next highest proposal applicant will be considered and so on, until there is a successfully supported and evaluated applicant or there are no more proposals.

If there are no proposals received during the RFP process, or there are no qualified applicants, due to lack of appropriate support or are unable to pass the evaluation, a second RFP will be issued. If after a second RFP a qualified candidate is still not identified, the TLD sunset process will be invoked in order to definitively close the gTLD.

If there is a qualified successor registry identified through this process, any funds collected from this applicant less evaluation costs and outstanding fees due will go to the registry disposing of the gTLD.

### 3. Emergency Back-End Registry Operator Temporary Transition Process

This process will be used for new gTLDs primarily when two conditions are met: (1) the registry is in breach of its Registry Agreement and (2) a Critical Function is being performed below the Emergency Threshold resulting in a situation of unacceptable risk as defined below. In such a case, operations can be transferred to an emergency provider of Back-End services until the registry operator can restore normal operations. This temporary transition could also be initiated at the request of the registry if they are aware of or anticipate an inability to adequately provide the Critical Functions.

Critical Function	Emergency Thresholds	
DNS (all servers)	4-hour continuous downtime	4-hour downtime / week
DNSSEC*	4-hour continuous downtime	4-hour downtime / week
SRS (EPP)	5-day continuous downtime	5-day downtime / month
Whois/Web-based Whois	7-day continuous downtime	7-day downtime / month
Data Escrow	Breach caused by missing escrow deposits	

\*DNSSEC threshold will be in effect three years after inclusion of the gTLD in the root zone.



Measurements to detect the Emergency Threshold for Critical Functions (except Data Escrow) will be drawn from the registry-SLA (Service Level Agreement) monitoring system used by ICANN as described in Specification 6 of the draft Registry Agreement.

It is also worth noting that this transition process is intended to be a temporary measure to protect registrants and gTLD users. The temporary transition of Critical Functions will remain in effect until the underlying issues are solved, or the gTLD is transitioned to another operator using one of the previously described Registry Transition processes. In order to allow this temporary transition, Registry Agreement for new gTLDs will include pre-acceptance from the registry to changes in the IANA database for DNS and Whois records, in case of emergency.

Once the registry is ready to resume operations and has remediated all issues that may have caused it to be in breach, it can initiate a **Registry Transition Process with proposed successor** in order to regain control of gTLD operations. The registry will identify itself as the proposed successor in that process.

ICANN will maintain two pre-selected Emergency Back-End Registry Operators (Emergency Operators) under contract: a primary and a secondary. An Emergency-Operator RFP process will be issued every five years to renew the contracts and/or identify and select new Emergency Operators. Emergency Operators that are selected will be from geographically diverse regions in order to increase the reliability of the Emergency Operators as a whole; should there be a catastrophe in a region affecting one Emergency-Operator's ability to function, the other would still be ready to operate. The basic eligibility requirements for Emergency Operators are at least three years of experience operating DNS and one year of experience operating Whois and EPP services.

Emergency Operators will be paid a fixed retainer fee while in stand-by ready mode and an active fee that will vary depending on the size of the operation. Emergency Operators will be expected to price their services at a cost-recovery basis. Funding for use of the Emergency-Operator's services during the first five years of the new gTLD will be drawn from the respective reserve fund required of new gTLD registry operators.

Emergency-Operator applicants will be evaluated using similar processes for new gTLDs, including pre-delegation testing on the infrastructure to be used in an emergency. Infrastructure must be ready to operate during the evaluation.

As soon as ICANN selects the primary and secondary Emergency Operators, they will be encouraged to offer a lightweight Registry-Registrar Agreement to all registrars that will enable the Emergency Operator to perform SRS functions during a temporary transition process.

When an emergency occurs and Emergency-Operator services are required, ICANN will first seek to engage the primary Emergency Operator. If the primary provider is not able to take the operation or if there is a conflict of interest, ICANN will engage the secondary provider. An active Emergency Operator will not be eligible to become the definitive successor registry or Back-End operator of the gTLD if there were a Registry Transition.

Emergency Operators will have Service Level Requirements (SLR) for activation of each of the Critical Functions as follows.



Critical Function	Service Level Requirement
DNS / DNSSEC	2 hours upon receipt of zone file
Whois/Web-based Whois	24 hours upon receipt of data
SRS (EPP)*	72 hours upon receipt of data
Data Escrow	24 hours upon start of SRS operation

\*SRS servers ready to accept requests from registrars.

ICANN will maintain an archive of daily zone files for all the gTLDs to allow the selected Emergency Operator to quickly resume DNS service in case of emergency. For the other Critical Functions, data will be obtained from the current registry and/or data escrow deposits.

Escrow Agents for new gTLDs will be required to agree to an SLR for release of gTLD data within 24 hours upon request, in case of emergency.

During emergency operation of Critical Functions for a gTLD, an Emergency Operator will not accept billable SRS operations from registrars (i.e., no new domains, no domain renewals, no domain transfers), and there will be no automatic domain expirations. The rest of the SRS operations will be allowed. The Emergency Operator will work with all the accredited registrars that have domains under sponsorship in the gTLD.

A flowchart of the process to be followed in case of emergency is in Appendix 4.



## Appendix 1. Prospective Registry Evaluation Matrix

Transition type	What is being changed		Evaluation type		
	Registry Front-end	Back-End Operator	Financial	Technical and Operations*	Due Diligence
Name change	Same	Same	Limited	Minimal	Limited
Current registry was not in breach	Same	Same	Limited	Minimal	Limited
	Same	New	Limited	Full	Limited
	New	Same	Full	Limited	Full
	New	New	Full	Full	Full
Registry was in breach	-	Same	Full	Limited	Full
	-	New	Full	Full	Full

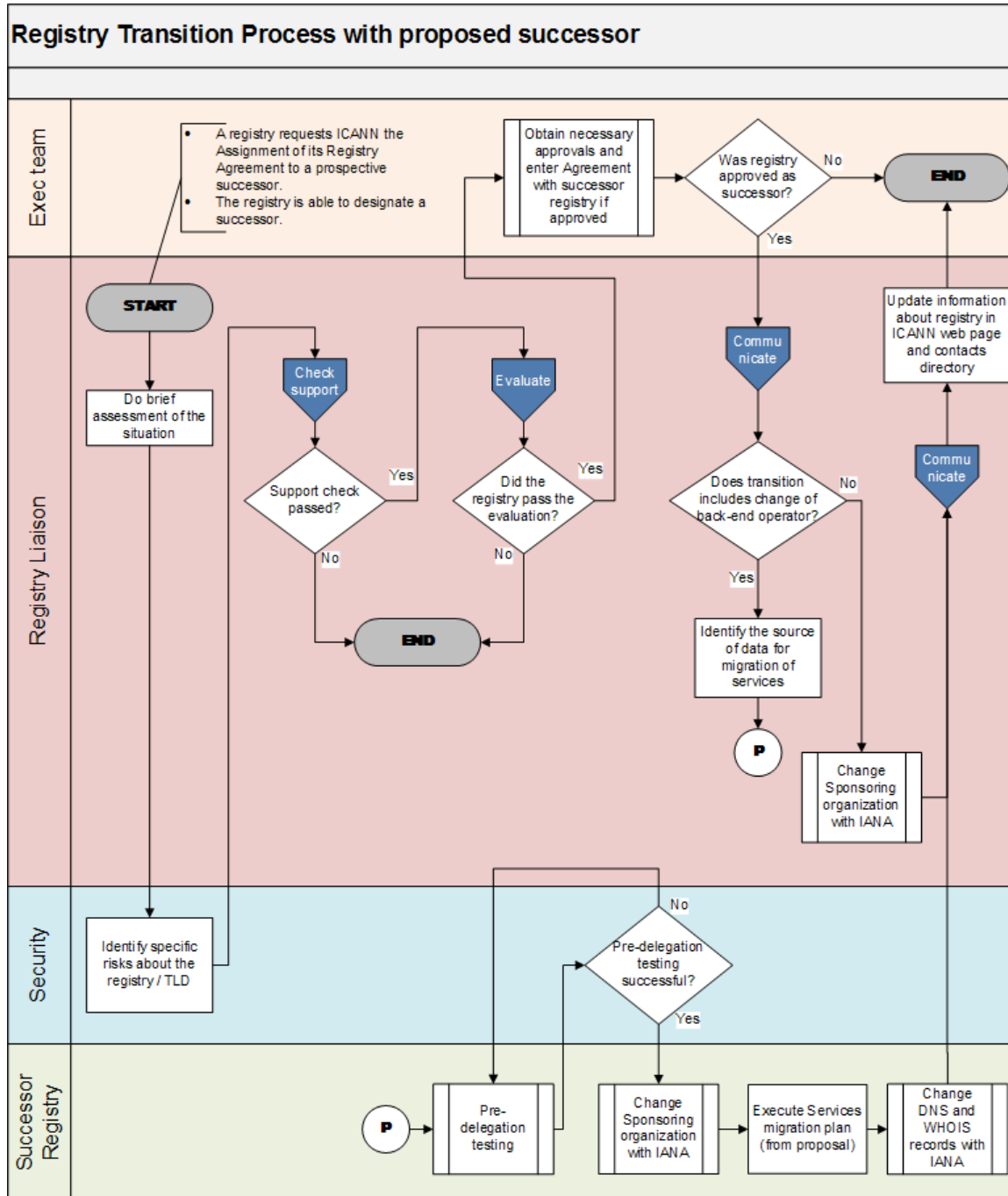
\* Technical and Operations evaluation includes review of a plan for Migrating Services and data from current registry.

*Full* represents a review that is similar in scope to the review of applicants in the new gTLD program. Prospective registry will cover the costs associated with the evaluation. It will be performed by one of the firms engaged in evaluating applications for new gTLDs.

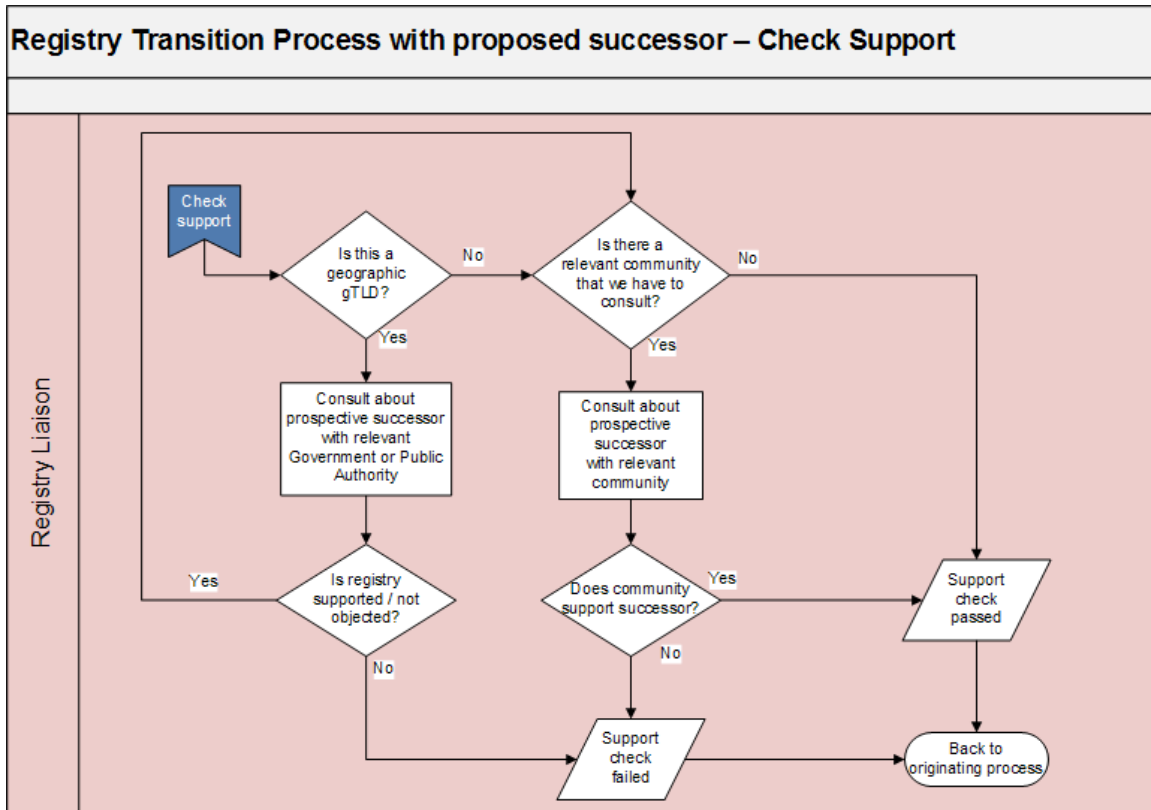
*Limited* represents a more narrow scope of review. For example, for Technical and Operations, this could consist of ensuring that the new organization has similar arrangements in place with the Back-End Registry Operator. Whether this type of evaluation will be performed internally and with or without cost for the prospective registry will depend on the specific case at hand.

*Minimal* represents a very narrow scope of review performed internally by ICANN and therefore without cost to the prospective registry.

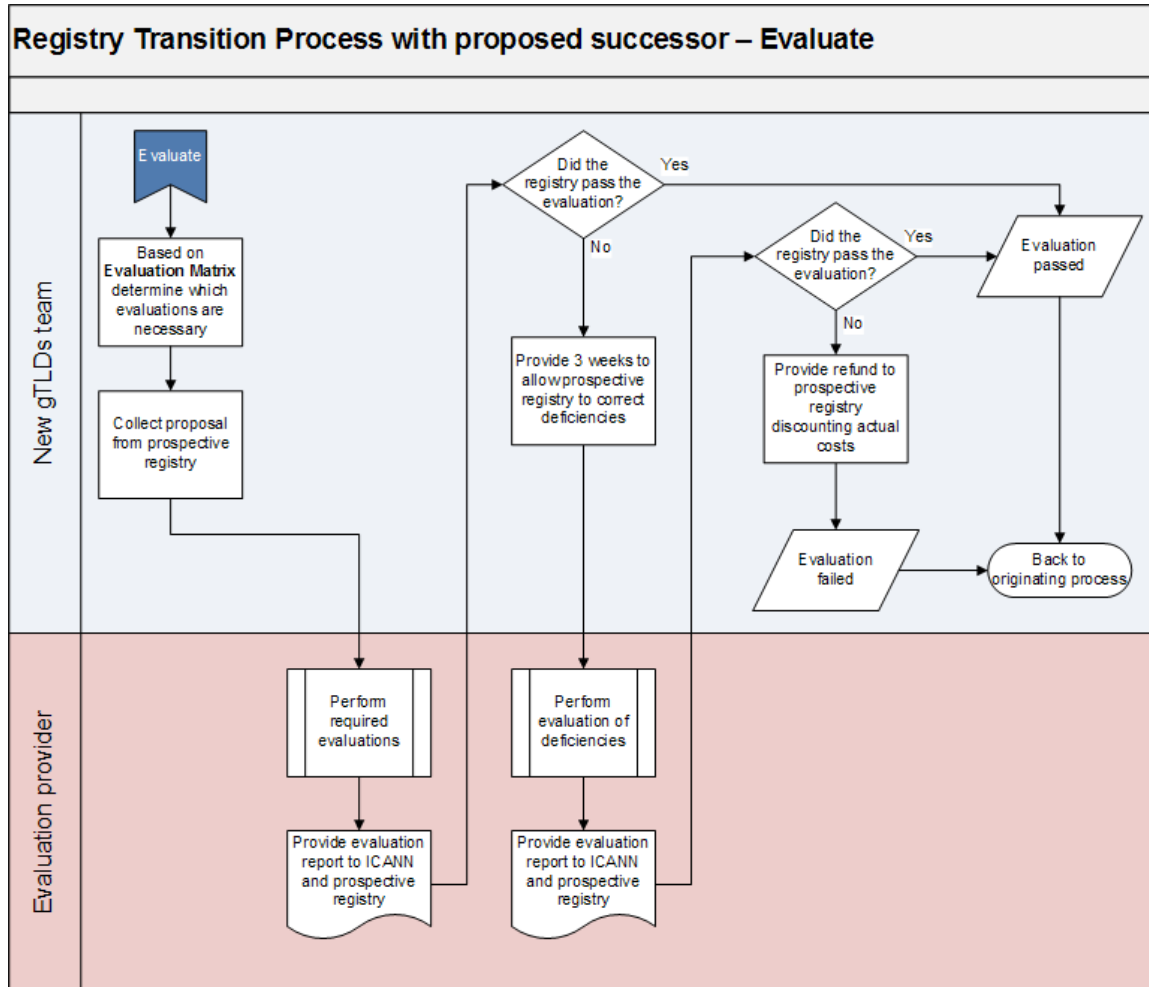
## Appendix 2-1. Registry Transition Process with proposed successor – flowchart



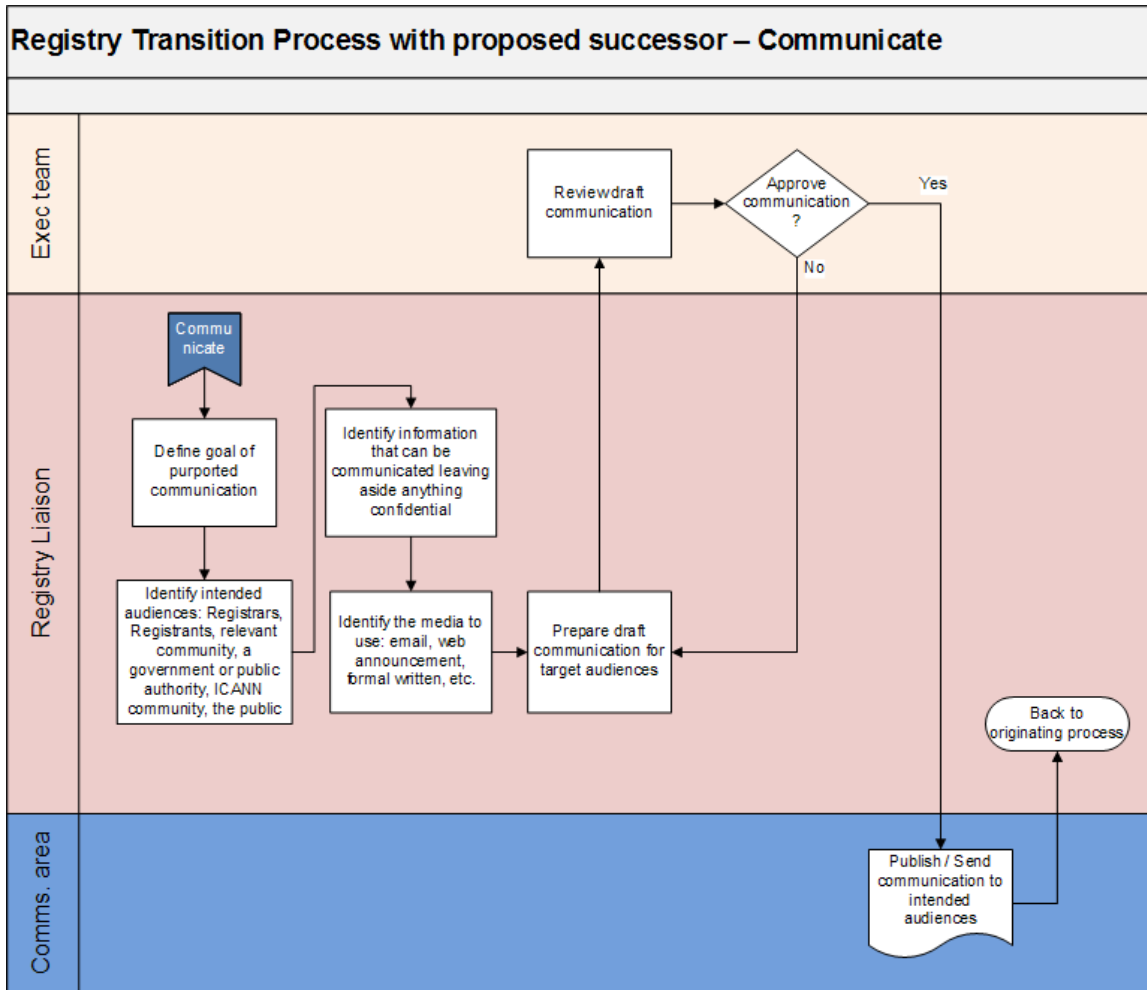
## Appendix 2-2. Registry Transition Process with proposed successor – check support flowchart



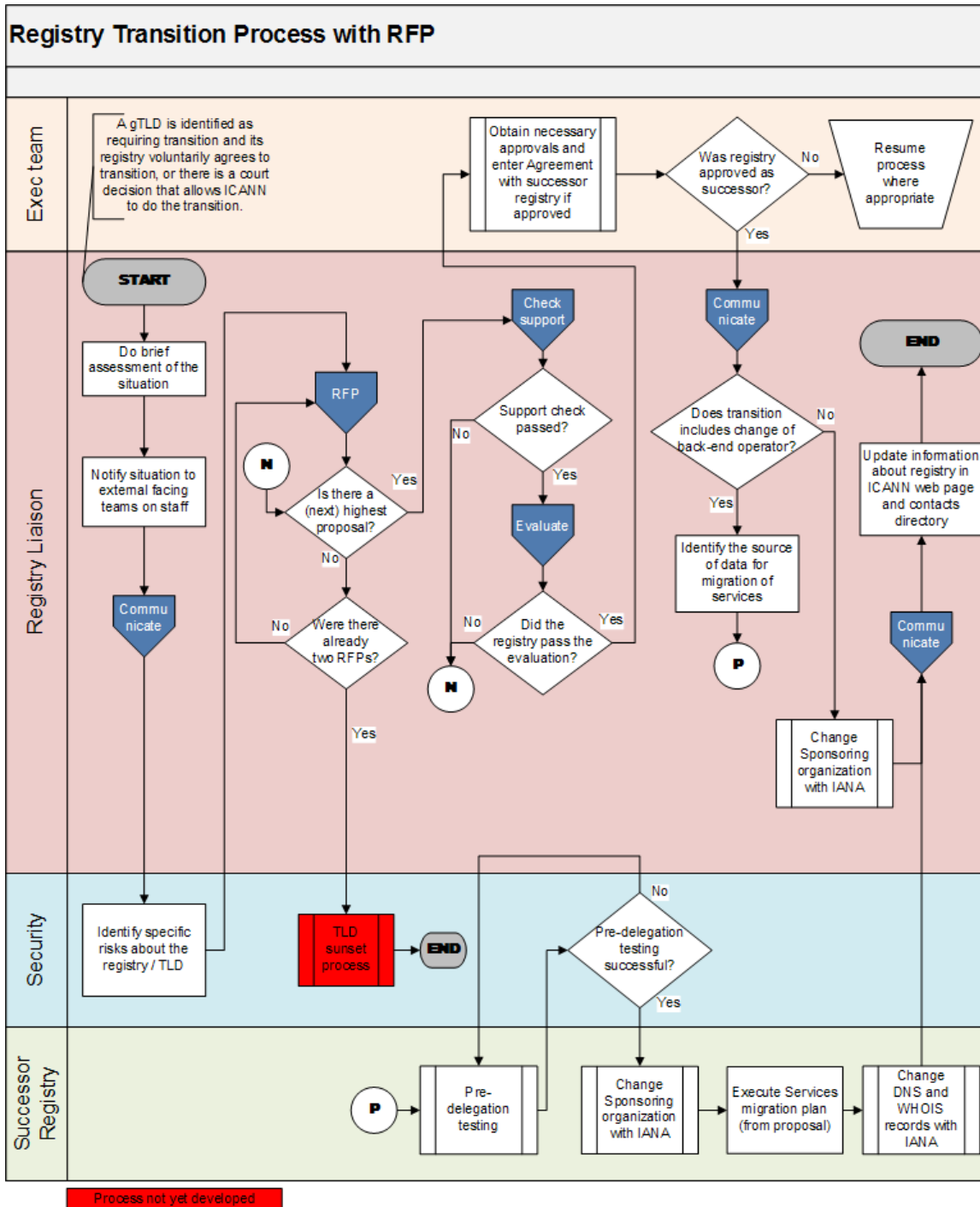
## Appendix 2-3. Registry Transition Process with proposed successor – evaluate flowchart



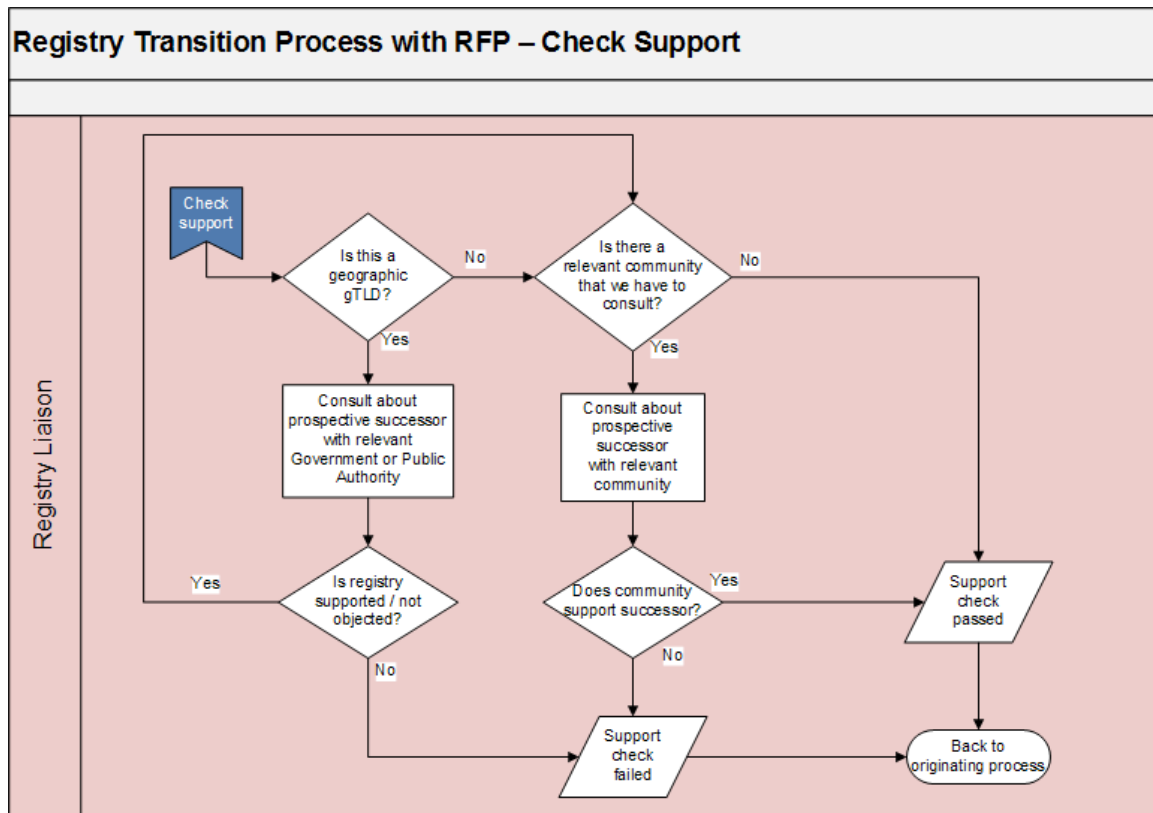
## Appendix 2-4. Registry Transition Process with proposed successor – communicate flowchart



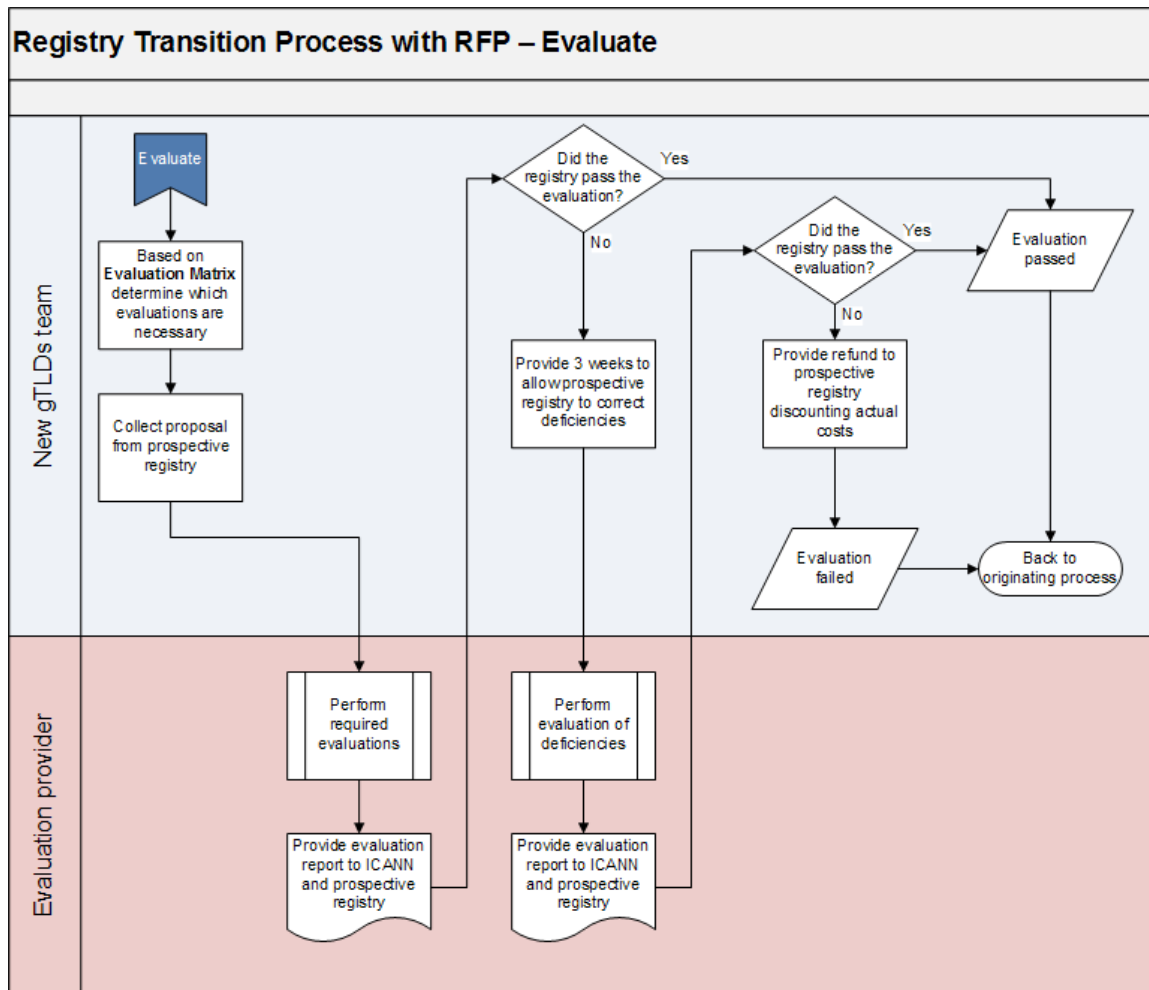
## Appendix 3-1. Registry Transition Process with Request for Proposals - flowchart



## Appendix 3-2. Registry Transition Process with Request for Proposals - check support flowchart

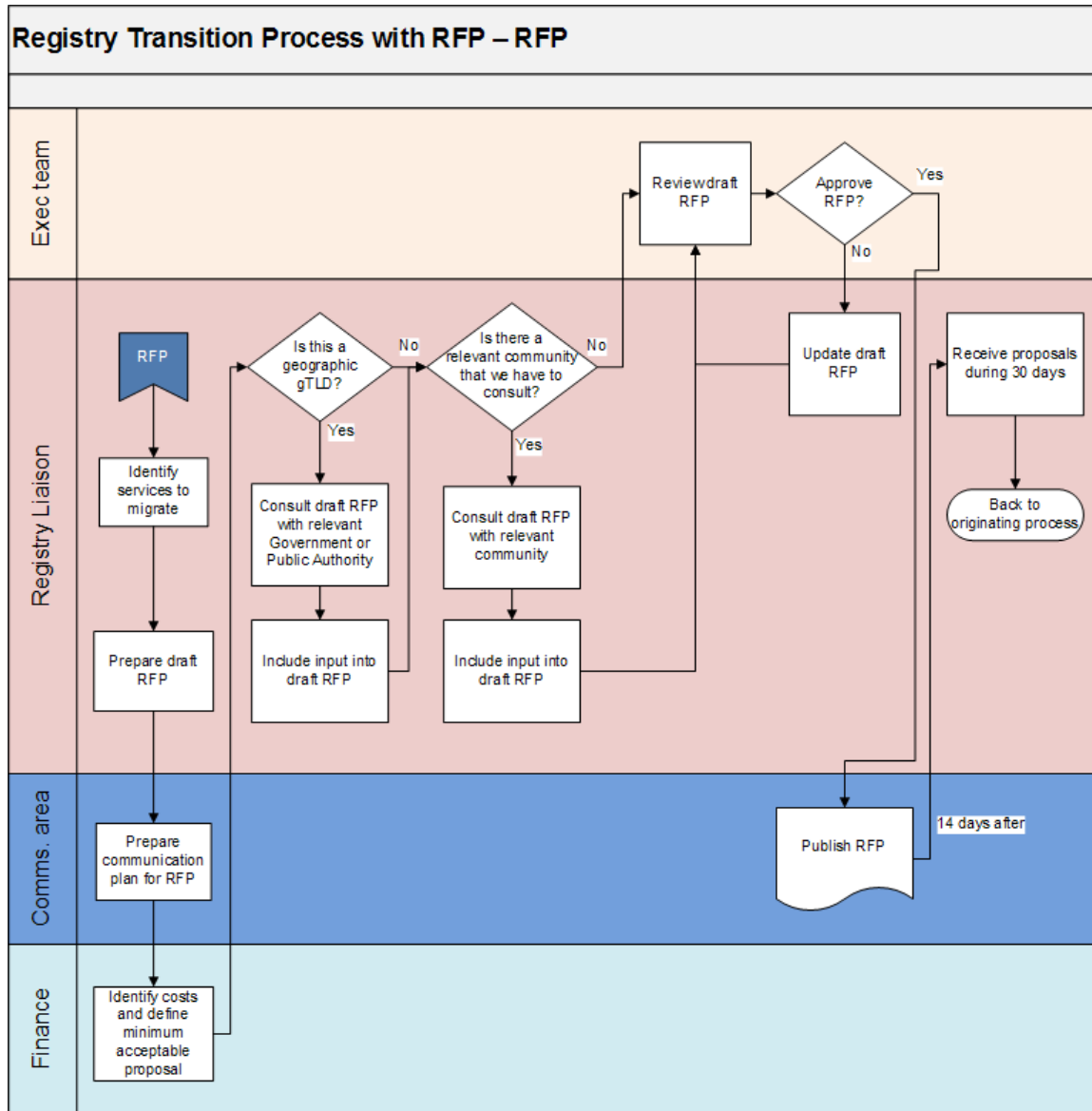


### Appendix 3-3. Registry Transition Process with Request for Proposals – evaluate flowchart

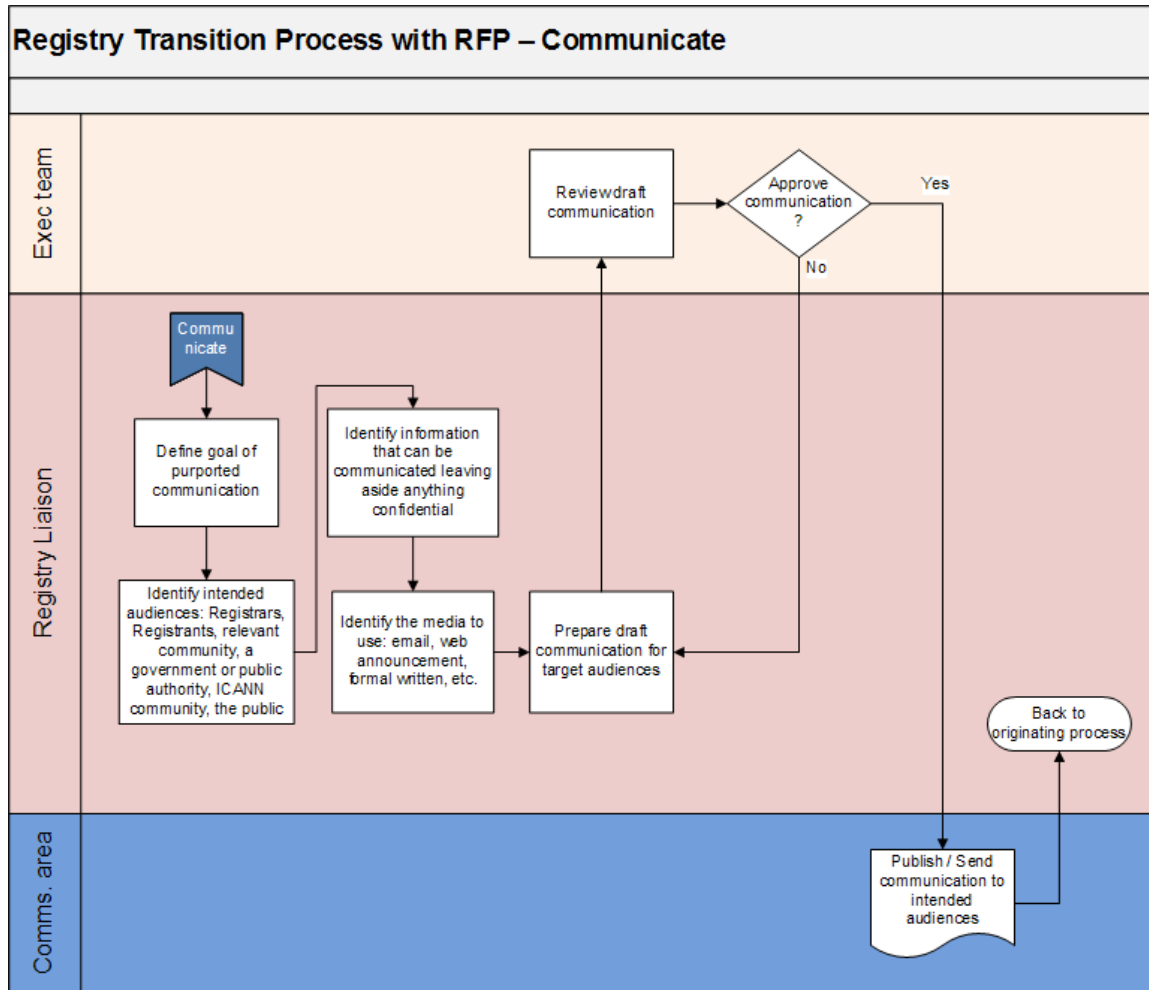




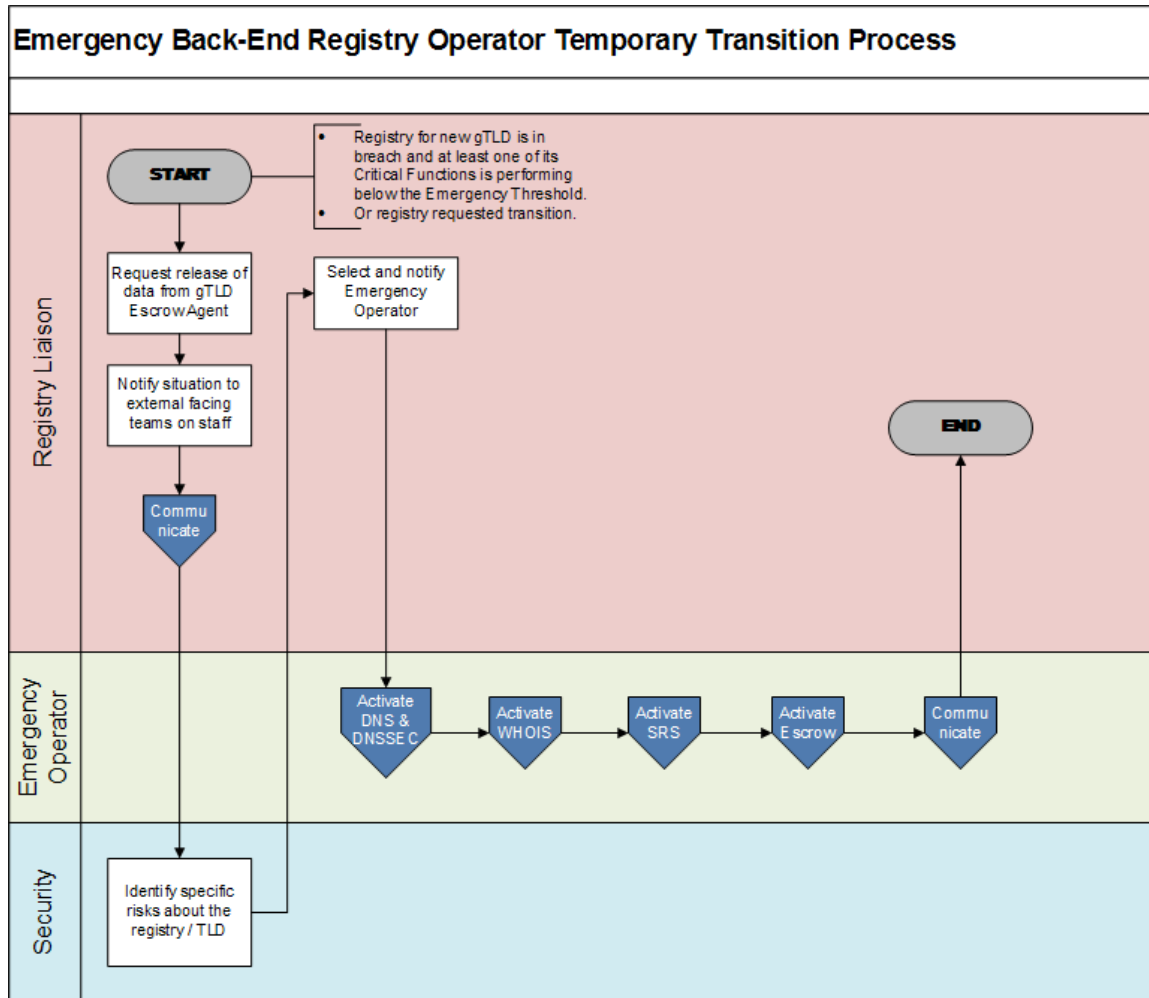
## Appendix 3-4. Registry Transition Process with Request for Proposals - flowchart



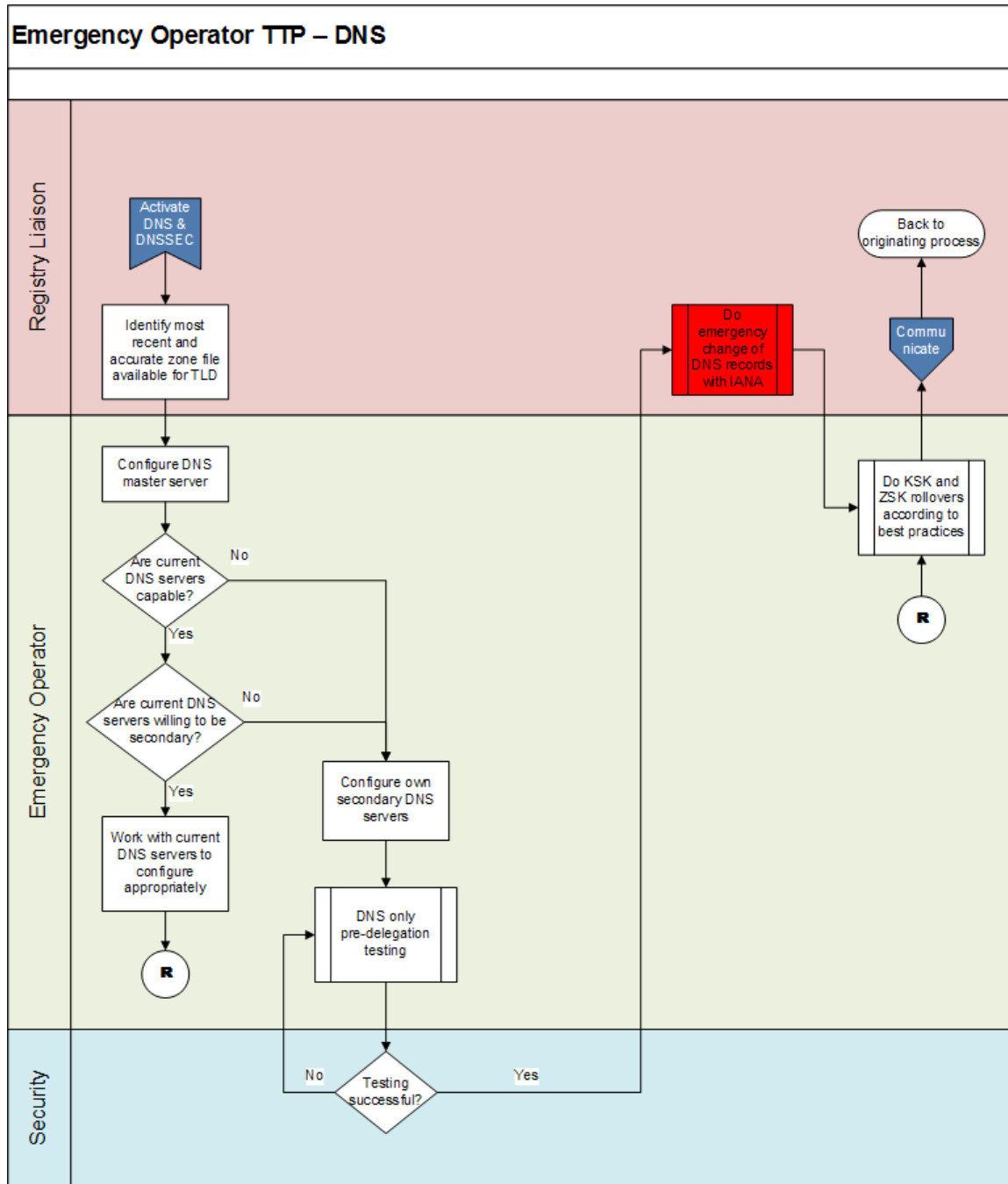
## Appendix 3-5. Registry Transition Process with Request for Proposals – communicate flowchart



## Appendix 4-1. Emergency Back-End Registry Operator Transition Process – flowchart

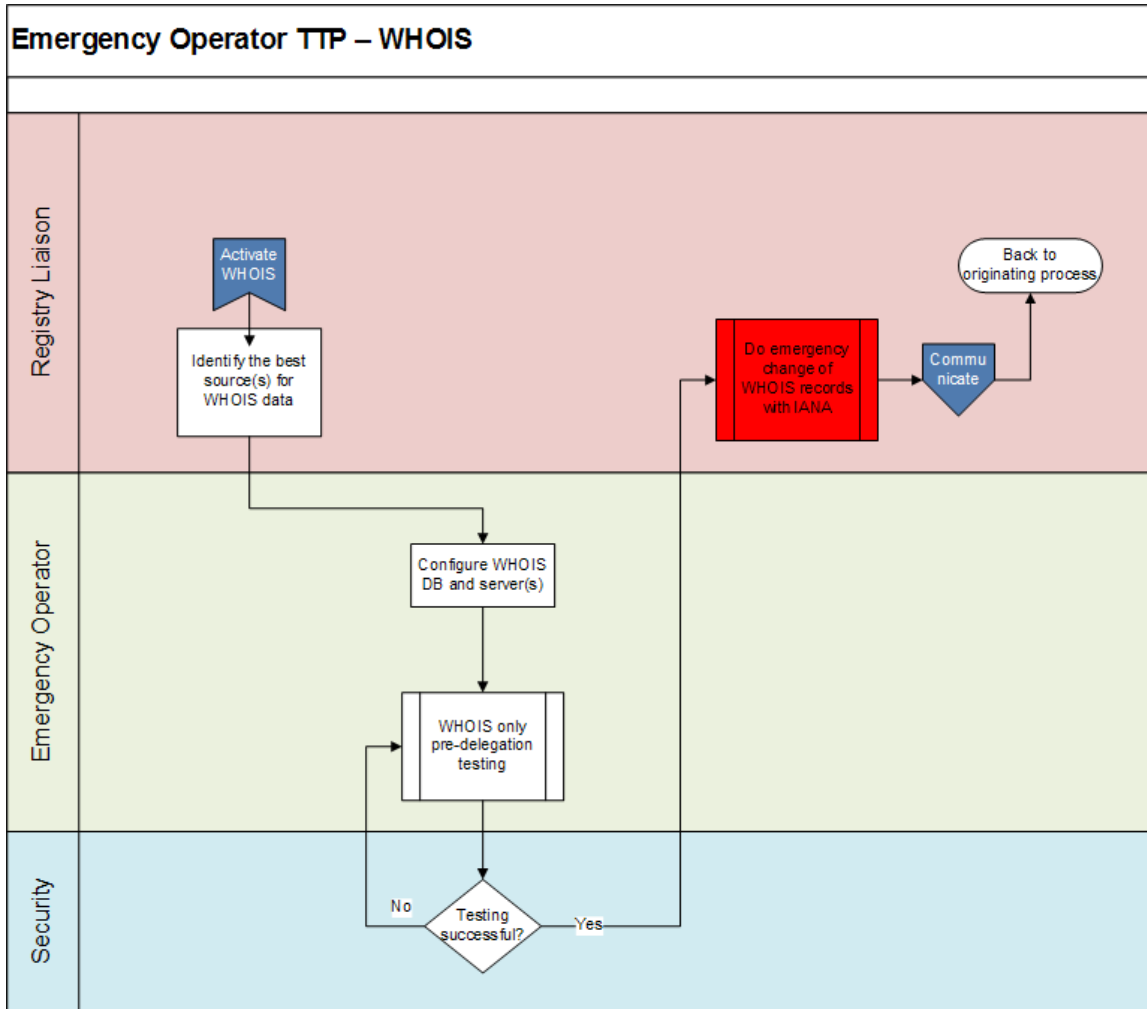


## Appendix 4-2. Emergency Back-End Registry Operator Transition Process - DNS flowchart



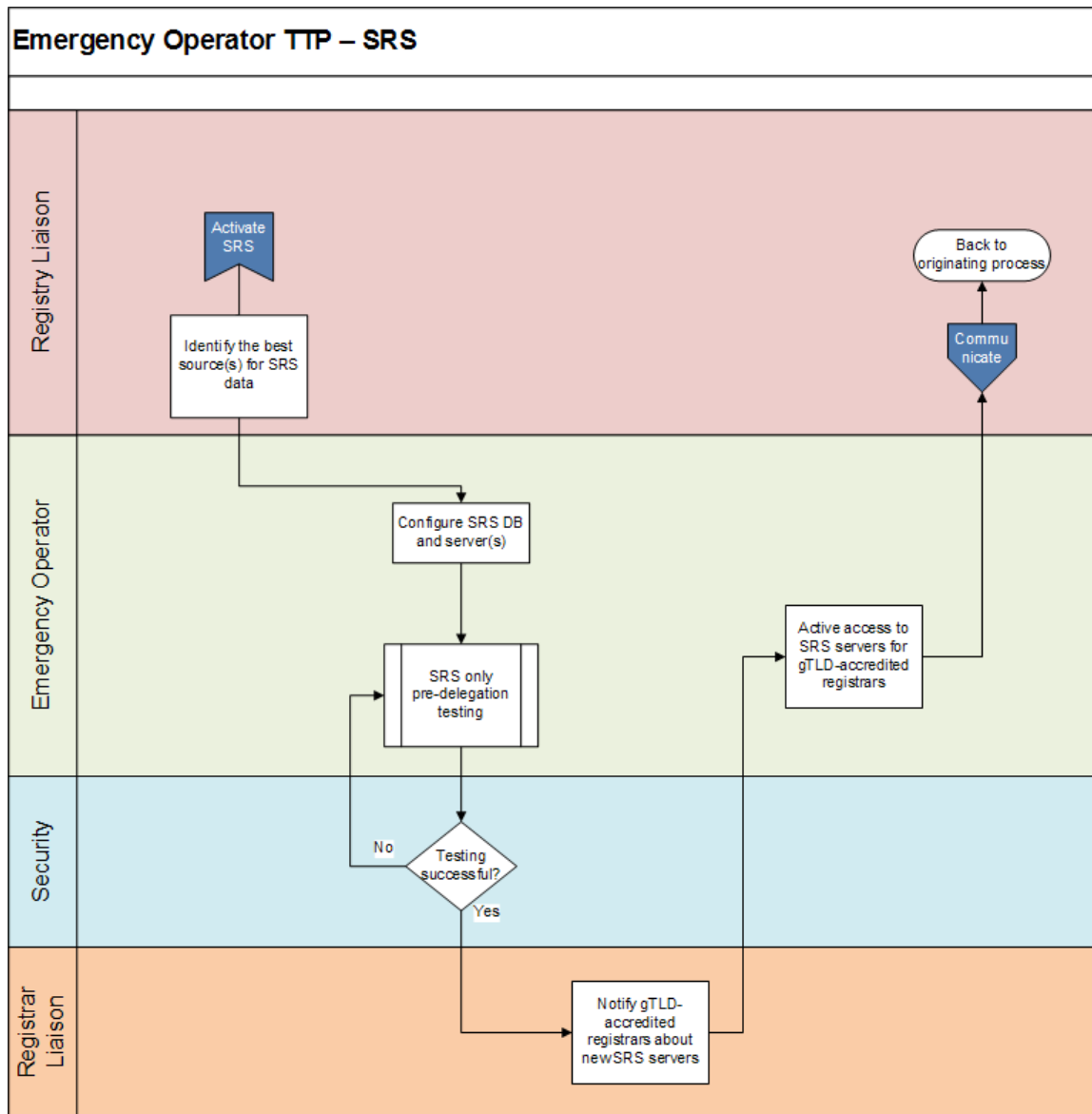
Process not yet developed

### Appendix 4-3. Emergency Back-End Registry Operator Transition Process - Whois flowchart

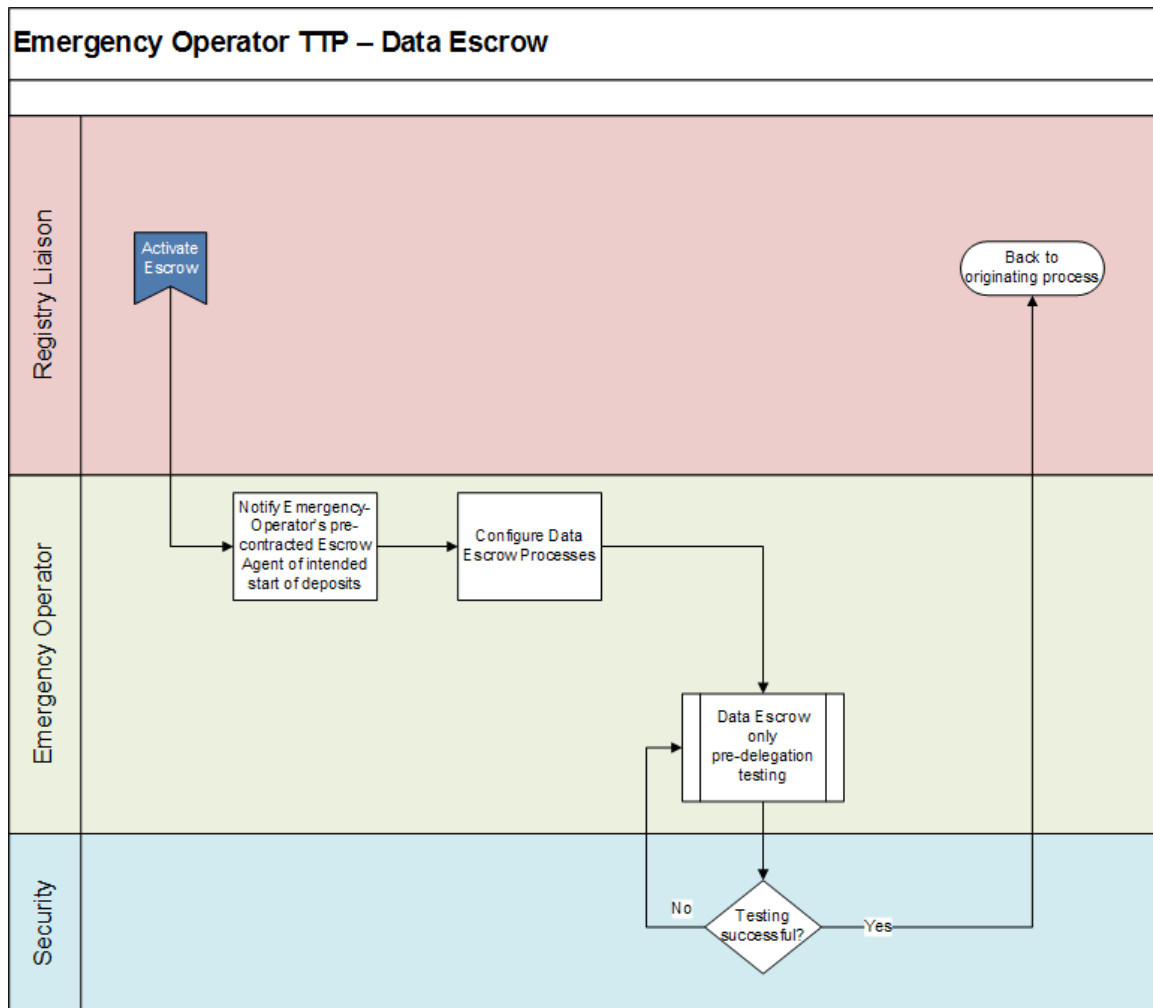


Process not yet developed

## Appendix 4-4. Emergency Back-End Registry Operator Transition Process – SRS flowchart



## Appendix 4-5. Emergency Back-End Registry Operator Transition Process – data escrow flowchart



## Appendix 4-6. Emergency Back-End Registry Operator Transition Process - communicate flowchart

