



New gTLD Program Explanatory Memorandum

gTLD Registry Transition Processes ~~Model~~

Date of Publication: ~~3130~~ May ~~2010~~2011

Background – New gTLD Program

Since ICANN was founded ~~ten years ago~~ in 1998 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 ~~24~~ 242 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~~ Instrumental to this process 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

- This paper is an updated version of the explanatory memorandum published on 31 May 2010, following comments primarily by the SSAC. Main changes from the previous version include: removed requirement for a second RFP; added the possibility of testing Emergency Operators from time to time; allowed active Emergency Operator to become successor; added the possibility of using current Back-End Registry Operator as Emergency Operator for certain cases; added the requirement for Emergency Operators to maintain a copy of the zone files for quick DNS recovery; added prohibition of domain name deletions during emergency operation.
- 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~~ Directory Services (RDDS), e.g., WHOIS provided over both port 43 and through a web based service.
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].¹

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.²

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.³

The process was created in FY06-07 and has been continuously updated; it is now called the Registry Continuity Framework⁴. The Incident and Event Management Process

¹ ICANN. (2009, September 30). *Affirmation of Commitments*. Retrieved from <http://www.icann.org/en/documents/affirmation-of-commitments-30sep09-en.htm>

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

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

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

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

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 required](#). 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/does 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/passes 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/is 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 operator 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 operator will then carry out the migration of data and services, and will request changes to DNS and WhoisRDDS (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/inability 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 a viable candidate is identified after a closed RFP process that did not identify a successor, that candidate might be considered based upon circumstances present at the time and that such a decision serves the public interest.

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 operator 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~~Thresholds, as defined in the Registry Agreement, 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 operator 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~~the~~ 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~~resolved~~, 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~~includes~~ pre-~~acceptance~~authorization from the registry operator to changes in the IANA database for DNS and ~~Whois~~RDSS (WHOIS) records, in case of emergency.

Once the registry operator is ready to resume operations and has ~~remediated~~remedied 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~~This option will be available to the registry operator until the expiry of the cure period for the breach. The registry operator will identify itself as the proposed successor in that process.

ICANN will maintain, at least, 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~~RDSS (e.g., WHOIS)~~ and EPP services.

ICANN will select Emergency Operators ~~will be paid a fixed retainer fee while in stand-by ready mode and an active fee that will vary depending based on value; the size best mix of the operation. Emergency Operators will be expected to service and 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 ~~for each case~~ will be drawn from the respective ~~reserve fund~~Continued Operations Instruments required ~~effor~~ new gTLD registry operators, as specified in Specification 8 of the Registry Agreement.

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. ICANN may, from time to time, require testing the Emergency Operator capabilities and readiness to accept and act upon an emergency transition.

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 Operators~~ to perform SRS functions during a temporary transition process. Registrars will be encouraged to engage the Emergency Operators before any emergency happens so they are ready to operate (e.g., an agreement is in place, credentials for accessing the SRS are already distributed, operational testing with the Emergency Operators is done, etc.) should an emergency transition happen for a particular gTLD.

When an emergency occurs and Emergency-Operator services are required, ICANN will ~~first~~ seek to engage one of the primary Emergency ~~Operator Operators~~. If the ~~primary selected~~ provider is not able to take the operation or if there is a conflict of interest, ICANN will engage ~~the secondary another~~ provider. An active Emergency Operator will ~~not~~ be eligible to apply to become the definitive successor registry or Back-End operator of the gTLD ~~if in the event~~ there ~~were is~~ a Registry Transition, according to the normal rules of the RFP. In order to have a balanced bidding process, an active Emergency Operator will provide operational informational to ICANN required to be included in an RFP for the operation of the gTLD.

There may be cases in which the current Back-End Registry Operator may serve as the Emergency Operator, that is, if:

- the registry operator requested to ICANN the emergency transition to the Back-End Registry Operator as the Emergency Operator;
- the current Back-End Registry Operator is operating the Critical Functions within the terms of the Service Levels defined in the Registry Agreement;
- the Back-End Registry Operator company is not related to or affiliated with the registry operator; and
- the Back-End Registry Operator accepts to operate the gTLD under better or equal terms than those agreed by the Emergency Operators.

Then ICANN, at its sole discretion, may offer to the Back-End Registry Operator to perform the registry functions for the gTLD. In such a case, the Back-End Registry Operator serving as Emergency Operator will be paid out of the proceeds from the Continued Operations Instrument.

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	<u>24 hours upon receipt of zone file request from ICANN</u>
<u>Whois/Web-based WhoisRDDS</u>	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 Emergency Operators will maintain an archive of, at least, 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 SLRa requirement 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 bill SRS operations from registrars ~~(i.e., no_~~

Typically, the Emergency Operator will not accept new domains, ~~no~~ domain renewals, ~~no~~ domain transfers), ~~and there, or domain name deletions from registrars. However, under certain exceptional cases the aforementioned operations will be no-automatic-domain expirations-accepted, e.g., under the Expedited Registry Security Request⁵, UDRP, or any other ICANN domain name dispute resolution procedures. Bulk domain transfers can be approved by ICANN for domains sponsored by registrars that no longer can service them (e.g., registrar has been de-accredited). Emergency Operator will not expire registrations or auto-renew them; and will include in the RDDS (e.g., WHOIS) output a short explanation (approved by ICANN) atop the legal disclaimer (if any) as described in section 1.1 of Specification 4 of the Registry Agreement of why the expiry date is in the past. The rest of the standard domain name, contact, and host (RFC 5730-34, 5910) SRS operations will be allowed. The Emergency Operator will work with all the accredited registrars that have domains under sponsorship in the gTLD.~~

A successor registry will be permitted to charge renewal or fractional renewals as of the effective date of the start of its operations. Successor registry will inherit the fees of the failed registry and will have to follow the process defined in the registry agreement in order to change them.

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

When transitioning from an Emergency Operator back to the previous registry operator or to a new registry operator, the Emergency Operator will collaborate and cooperate with the new operator in order to achieve an orderly transition with minimum impact to registrants and gTLD users.

ICANN will monitor and document emergency transition processes when/if they happen. Metrics will be developed including registry operator and EBERO performance in the five critical functions. ICANN will note what worked well and what could be improved in order to propose modifications to this process.

4. Process for adopting the processes

Once the Applicant Guidebook is approved, these processes will be adopted and published on the ICANN website.

⁵ <http://icann.org/en/registries/ersr/>

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

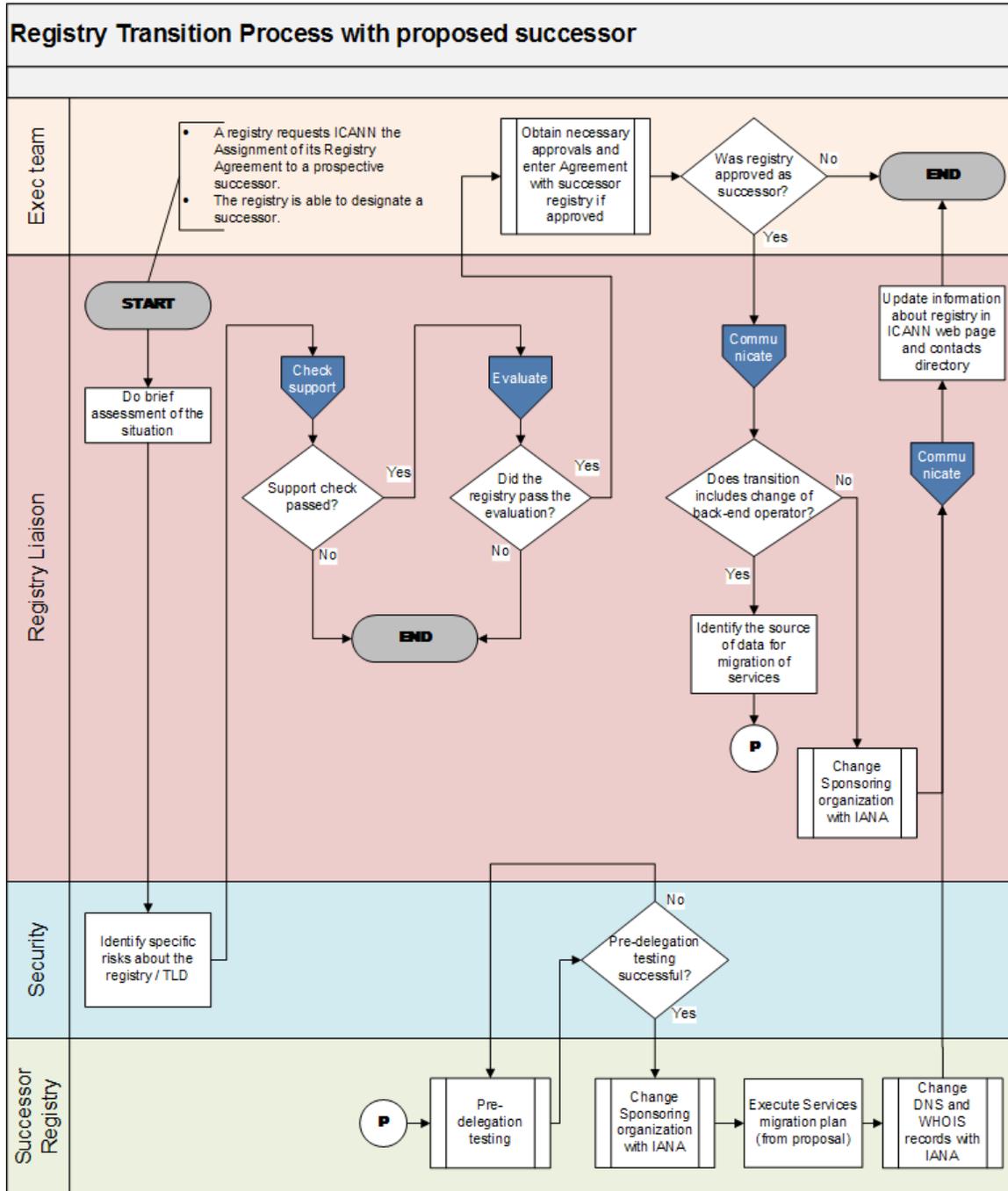
* Technical and Operations evaluation includes review of a plan for Migrating Services and data from current registry.

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.

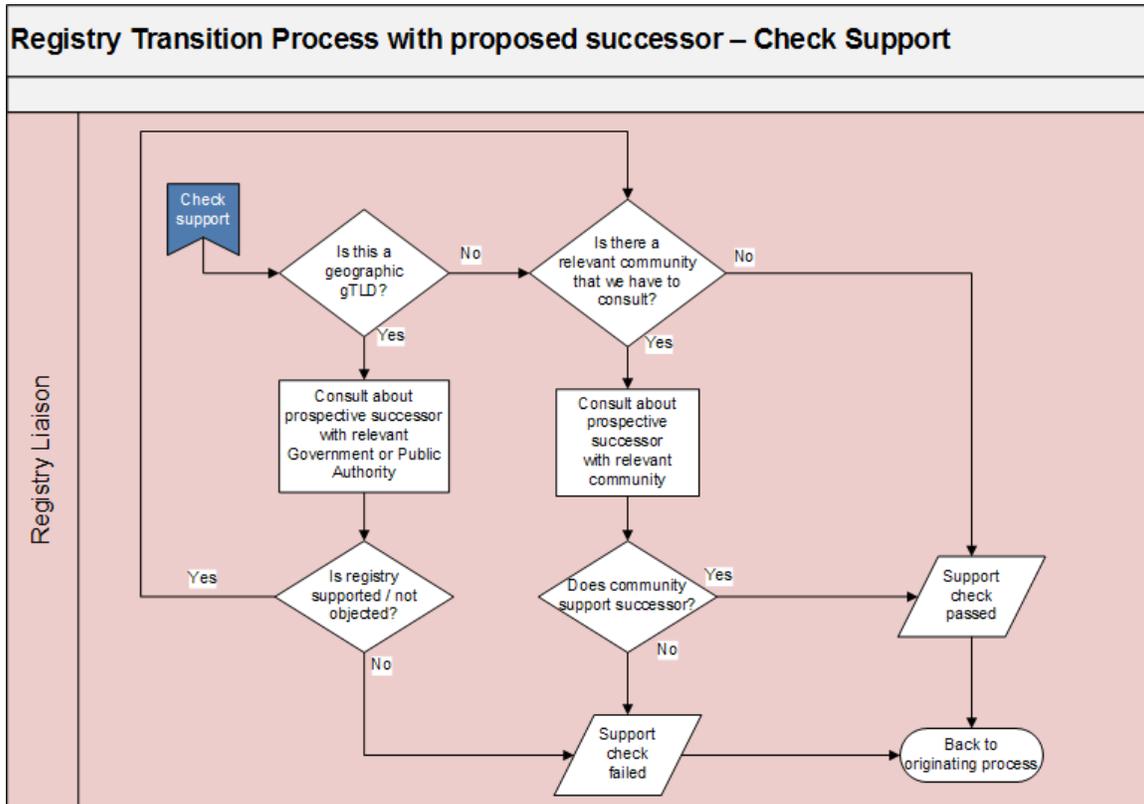
Limited represents a more narrow scope of review. For example, for Technical and Operations, this could consist of ensuring that the new organization has similar arrangements in place with the Back-End Registry Operator. Whether this type of evaluation will be performed internally and with or without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

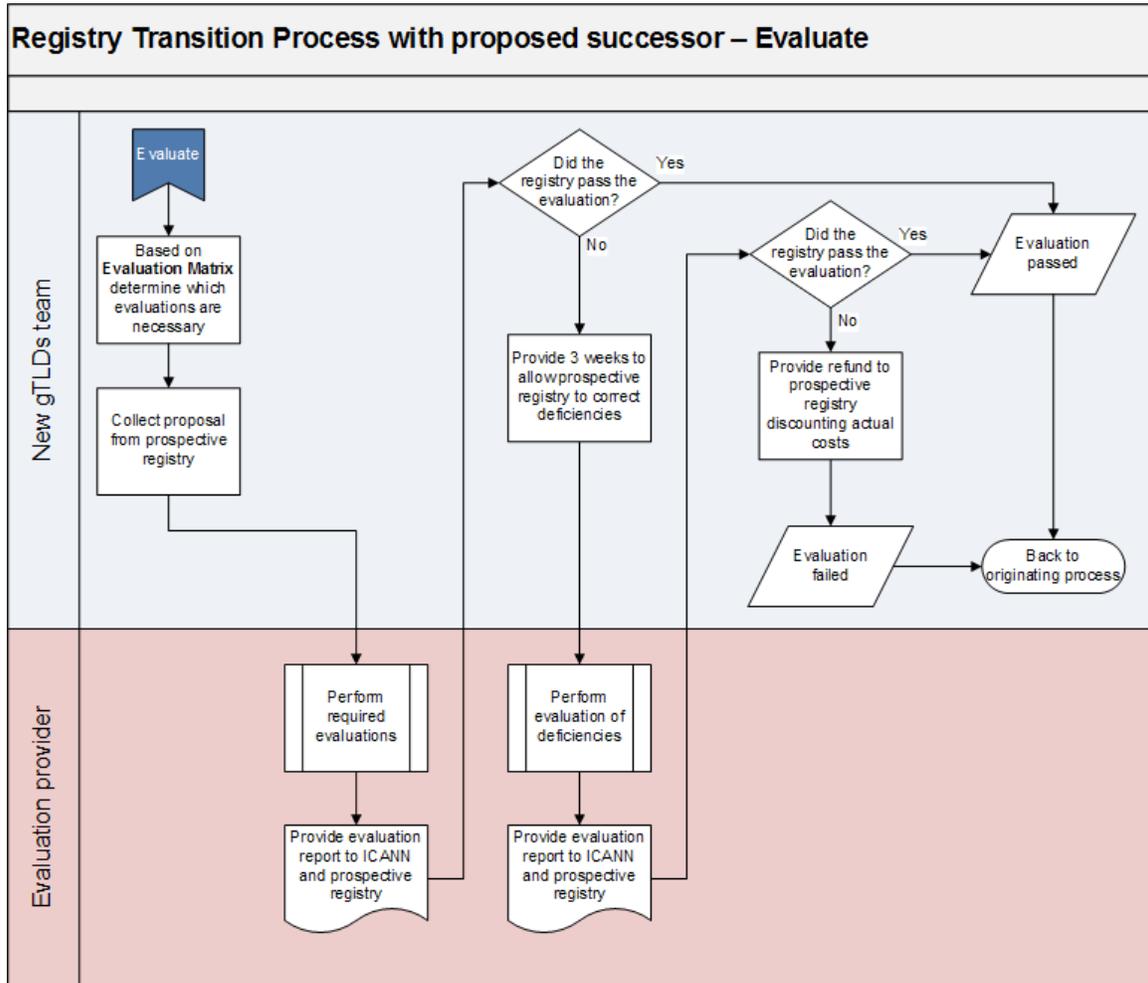
Appendix 2-1. Registry Transition Process with proposed successor – flowchart



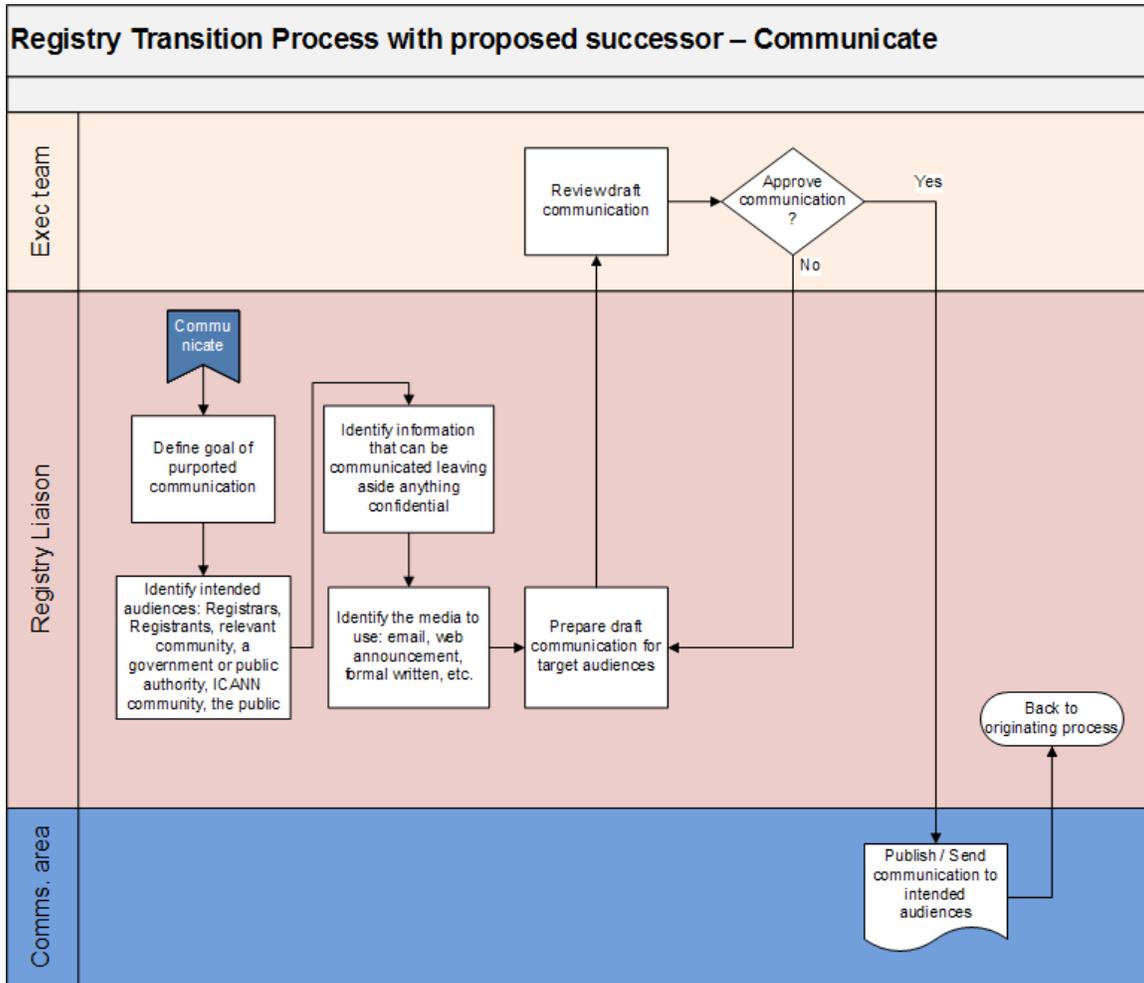
Appendix 2-2. Registry Transition Process with proposed successor – check support flowchart



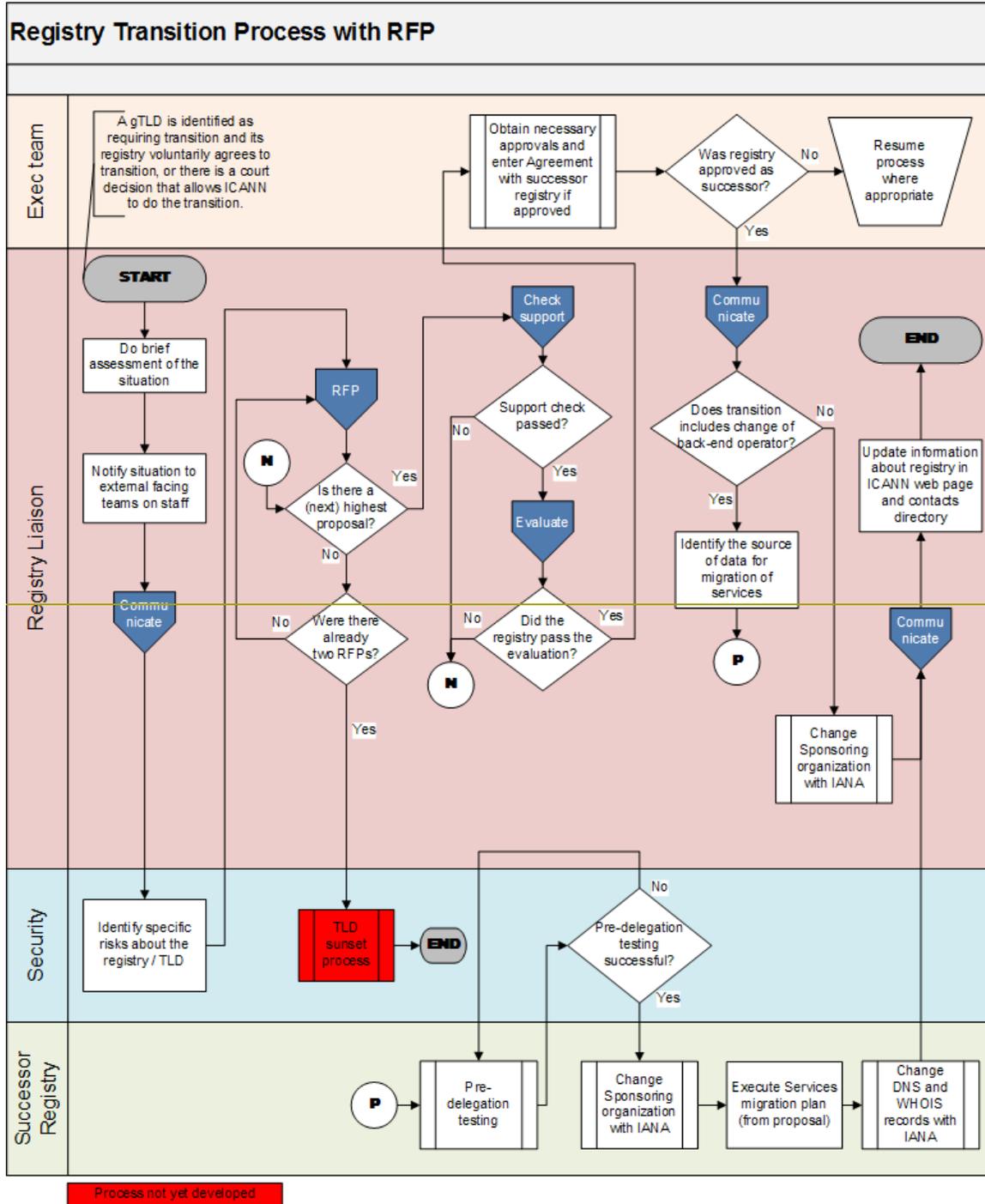
Appendix 2-3. Registry Transition Process with proposed successor – evaluate flowchart



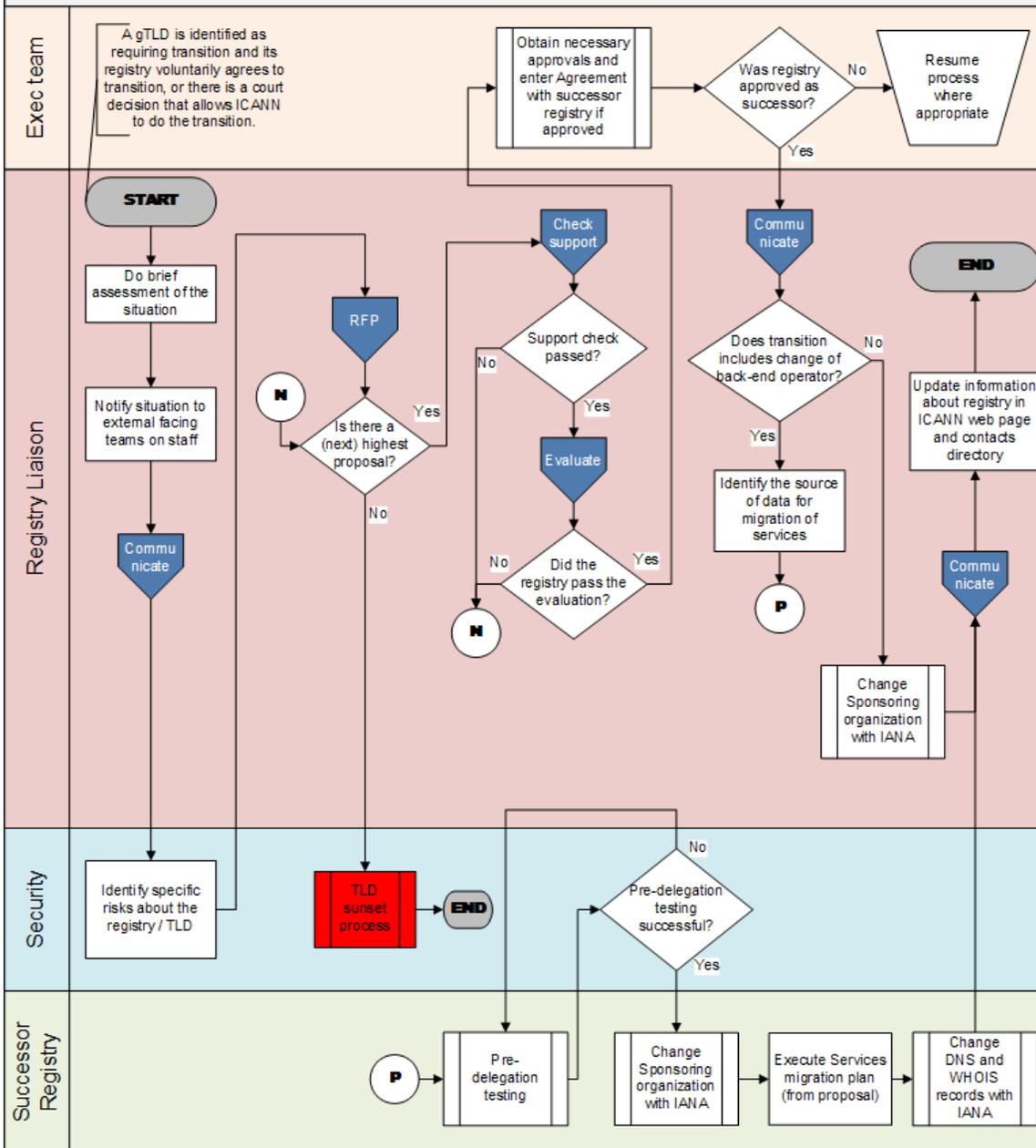
Appendix 2-4. Registry Transition Process with proposed successor – communicate flowchart



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

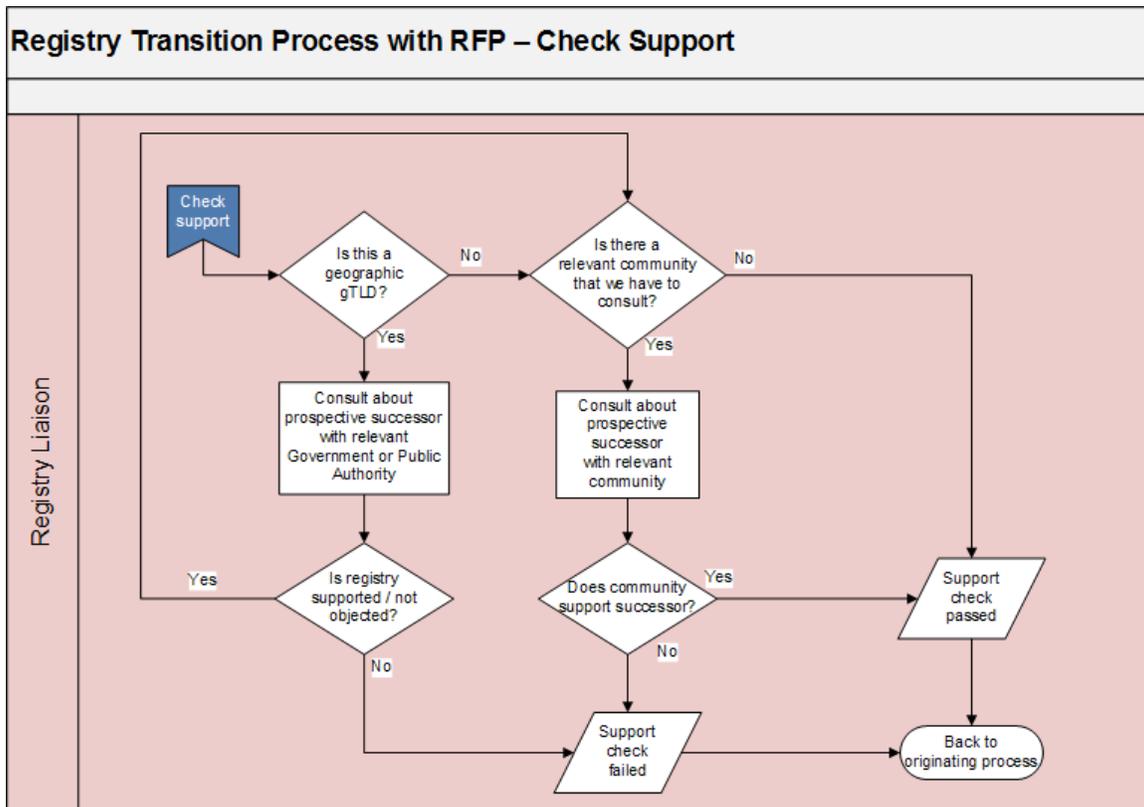


Registry Transition Process with RFP

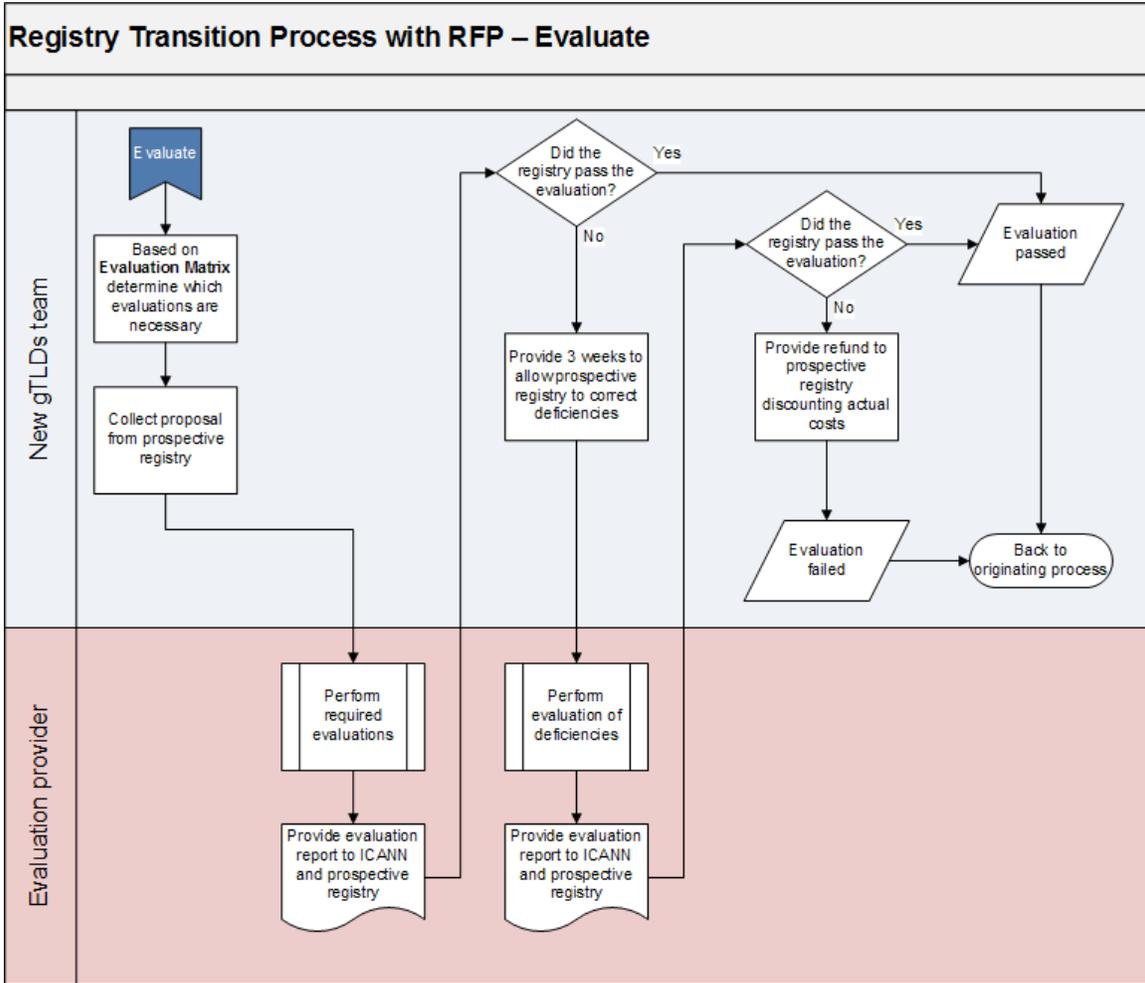


Process not yet developed

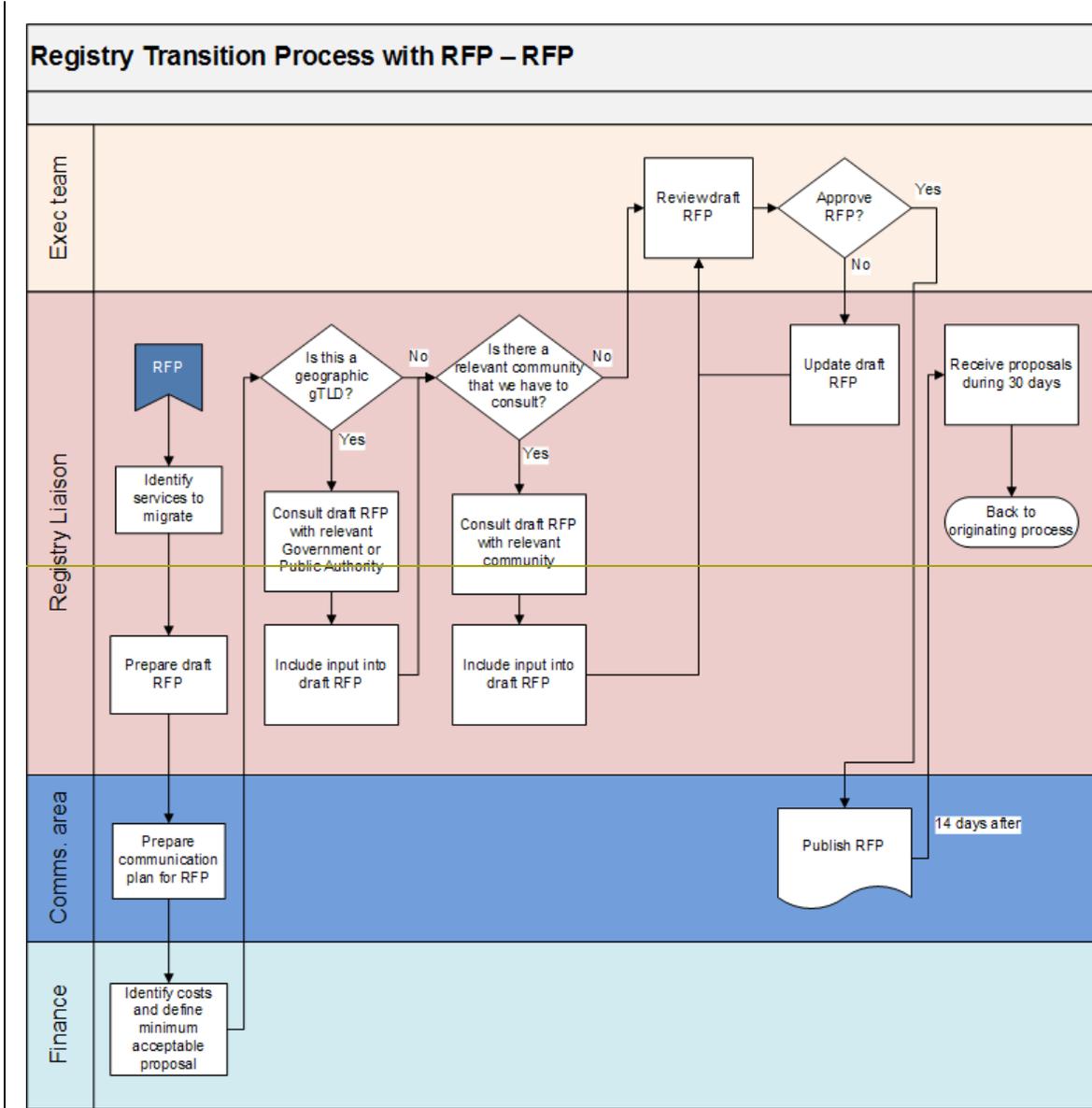
Appendix 3-2. Registry Transition Process with Request for Proposals - check support flowchart



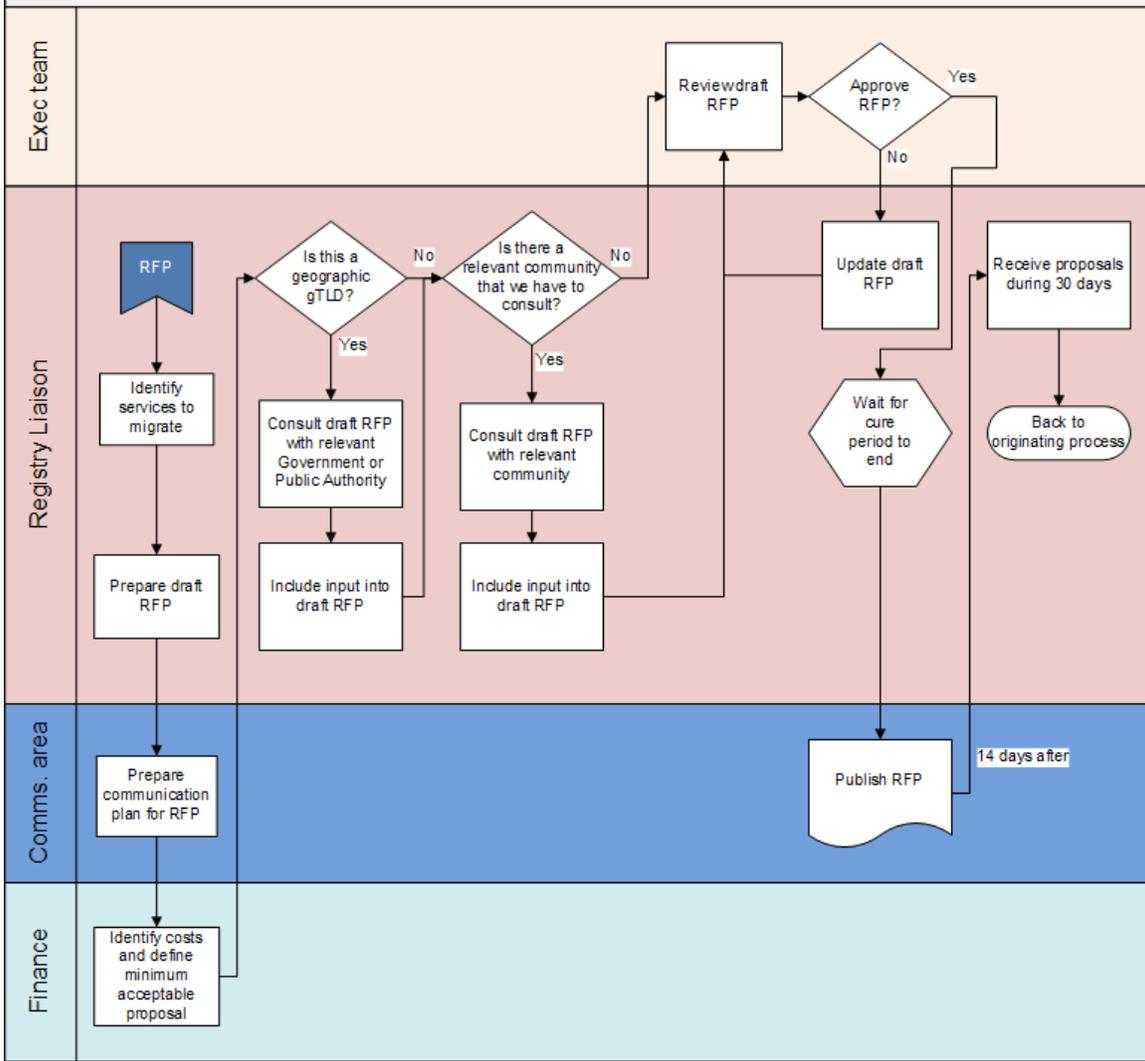
Appendix 3-3. Registry Transition Process with Request for Proposals – evaluate flowchart



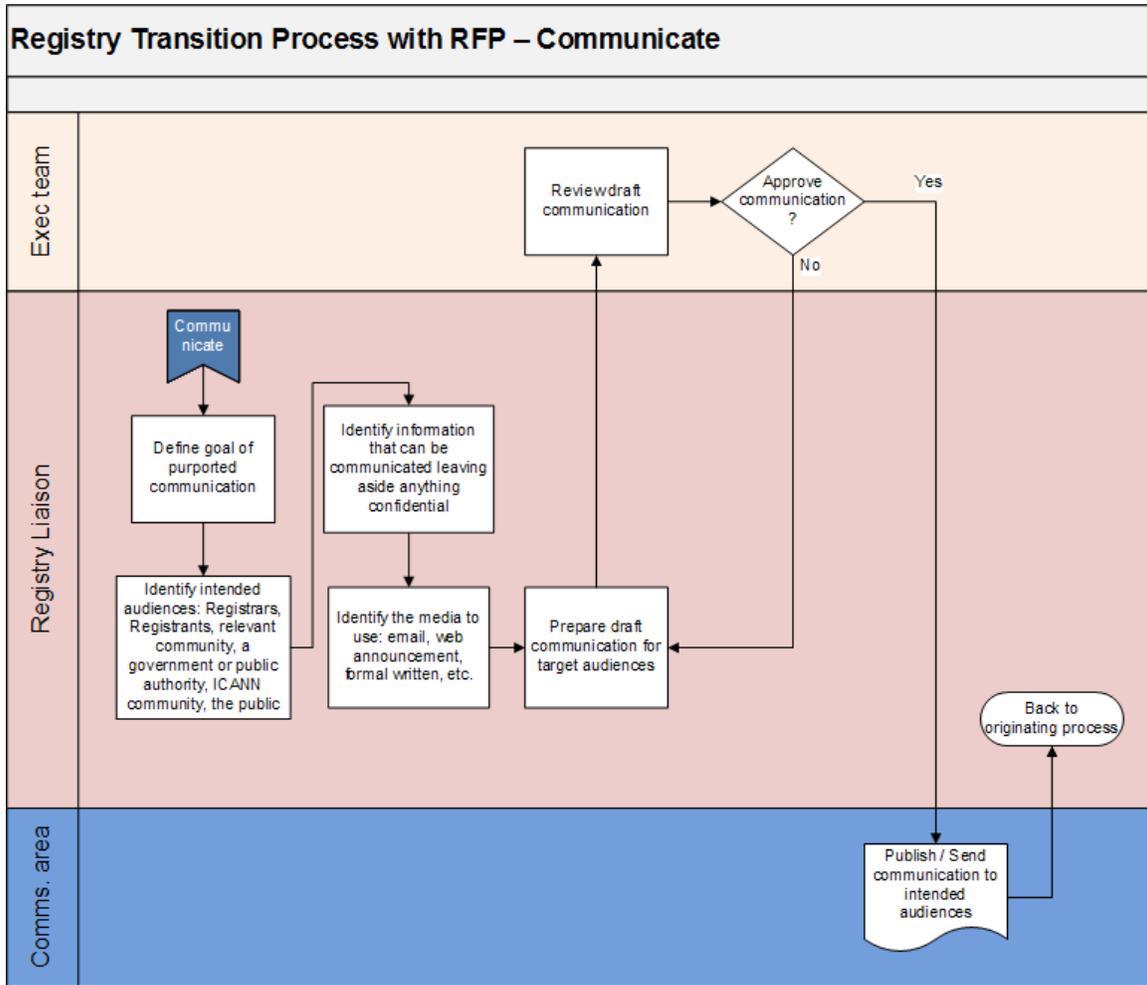
Appendix 3-4. Registry Transition Process with Request for Proposals - flowchart



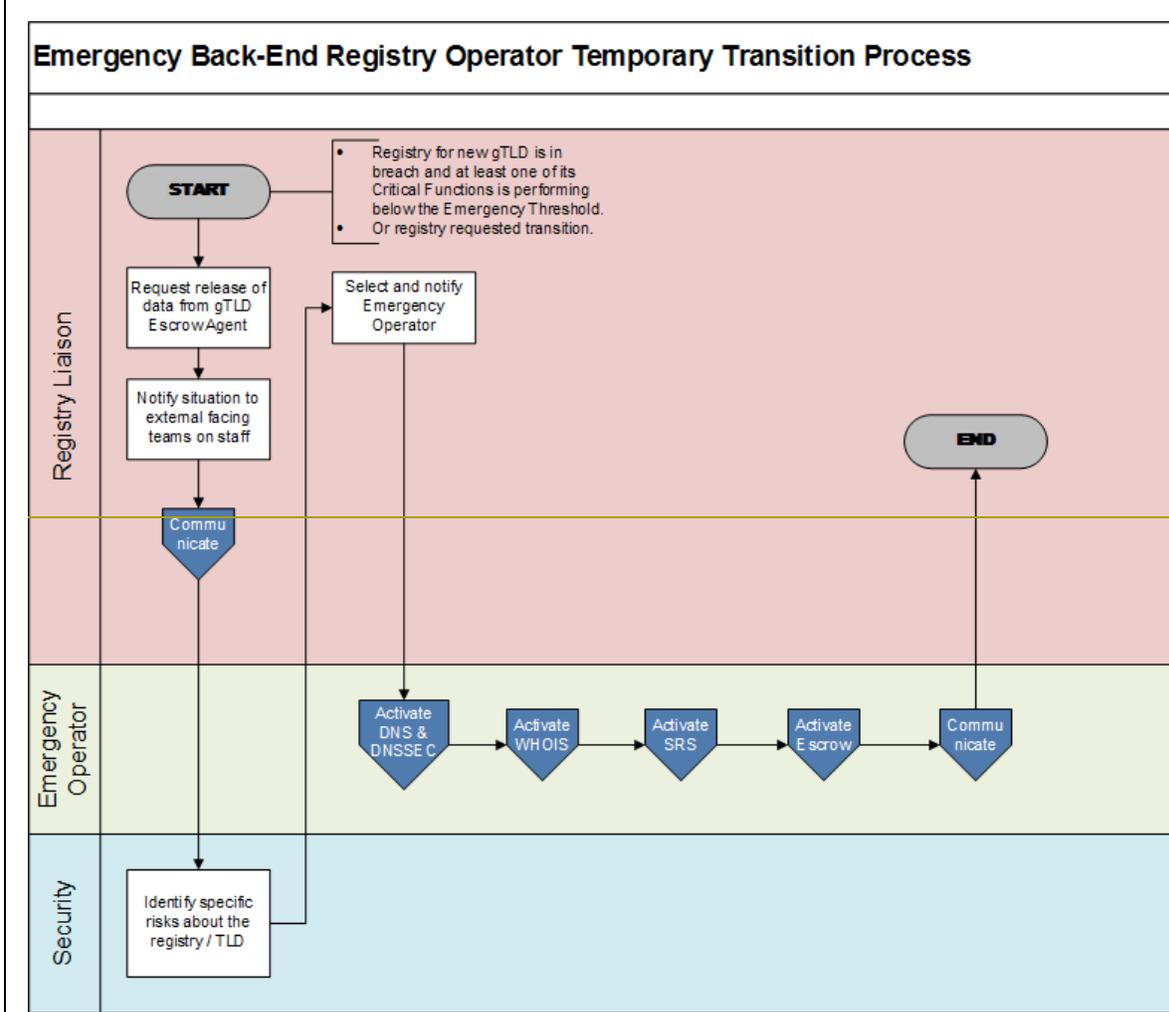
Registry Transition Process with RFP – RFP



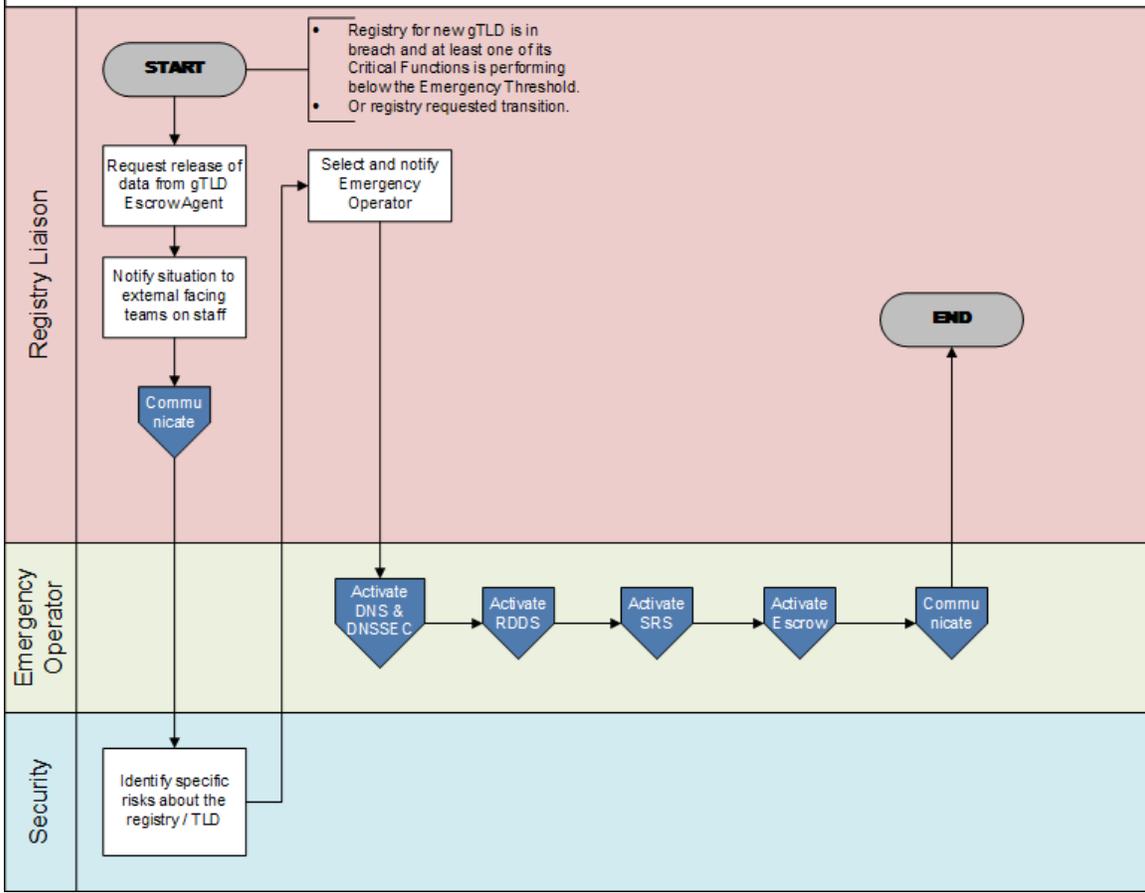
Appendix 3-5. Registry Transition Process with Request for Proposals – communicate flowchart



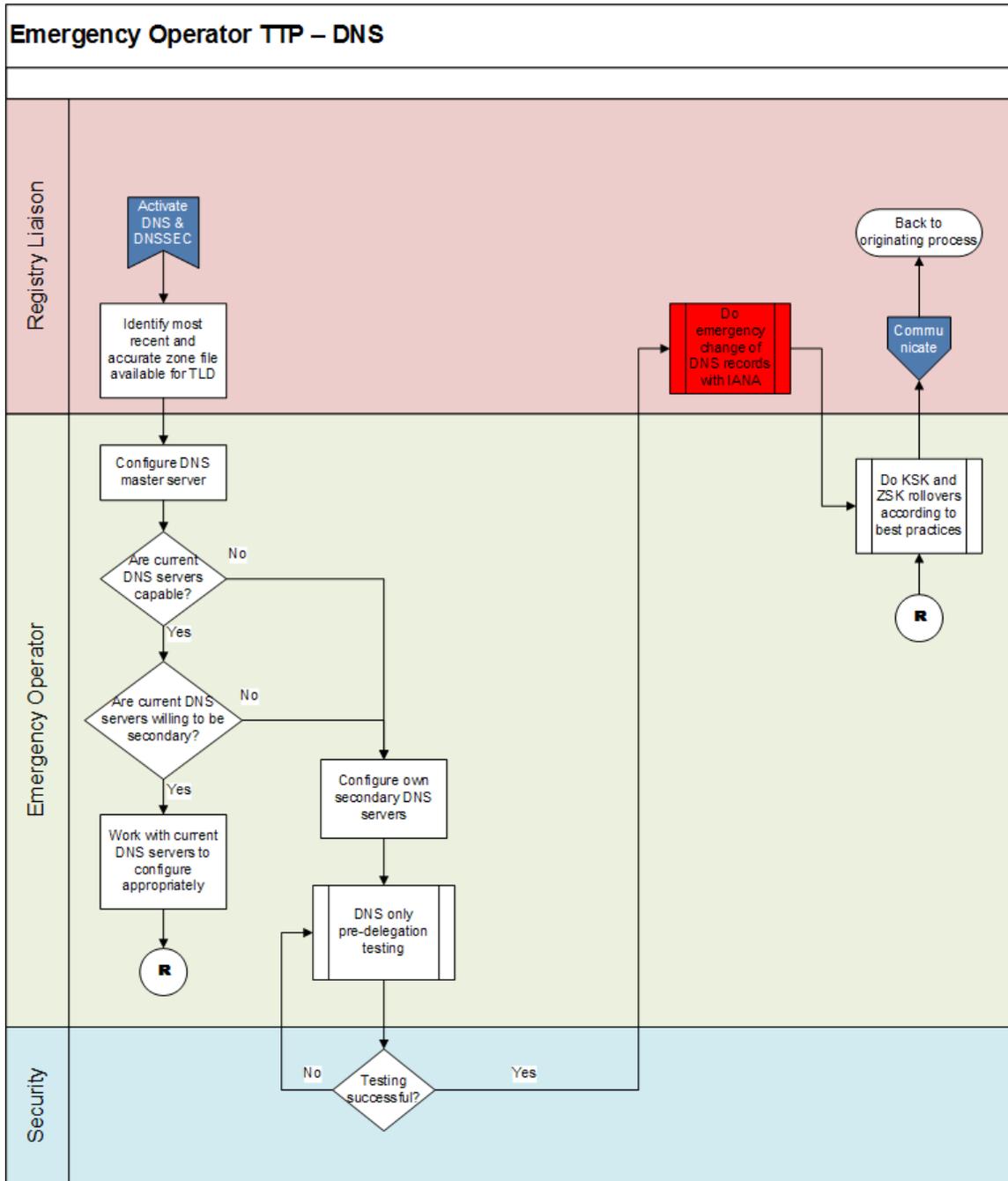
Appendix 4-1. Emergency Back-End Registry Operator Transition Process – flowchart



Emergency Back-End Registry Operator Temporary Transition Process

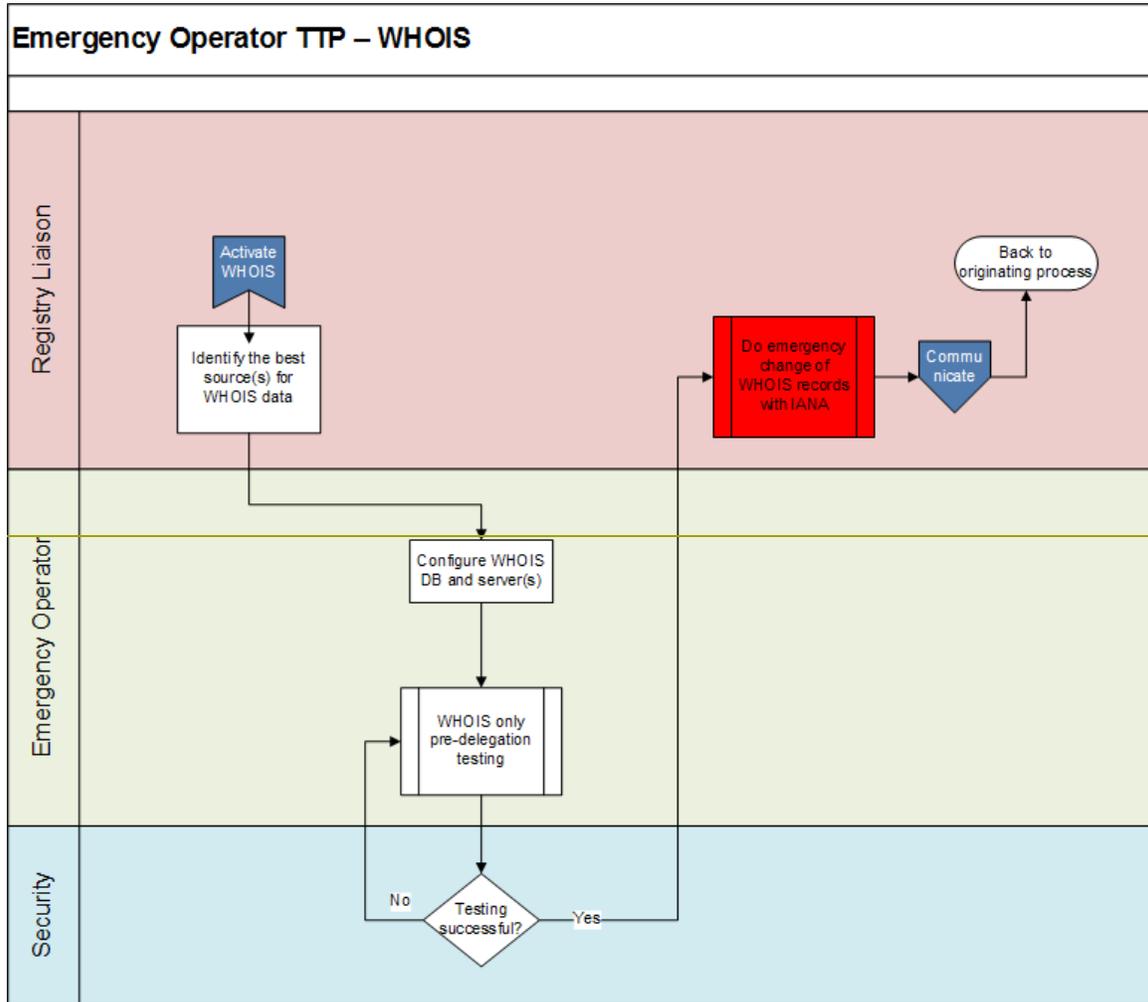


Appendix 4-2. Emergency Back-End Registry Operator Transition Process – DNS flowchart



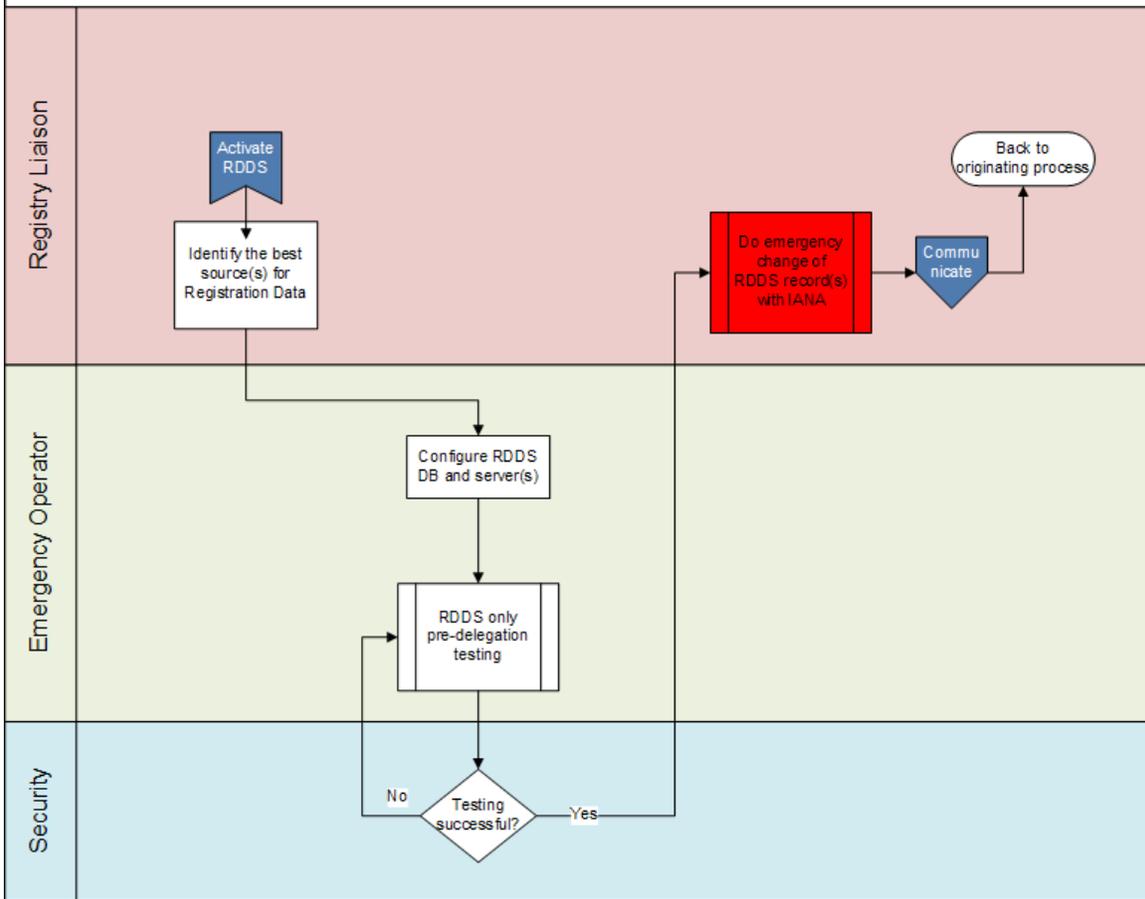
Process not yet developed

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



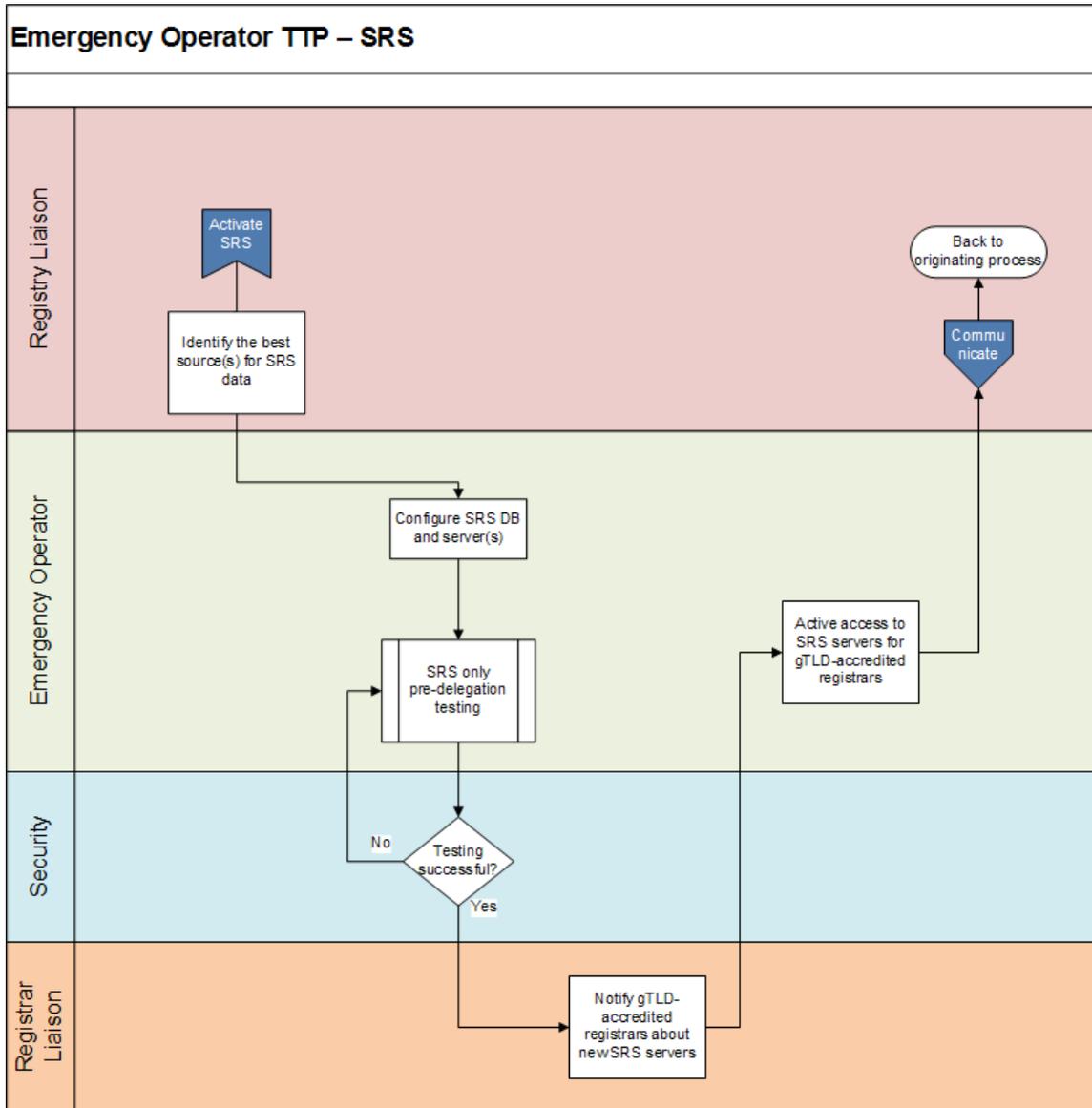
Process not yet developed

Emergency Operator TTP – RDDS

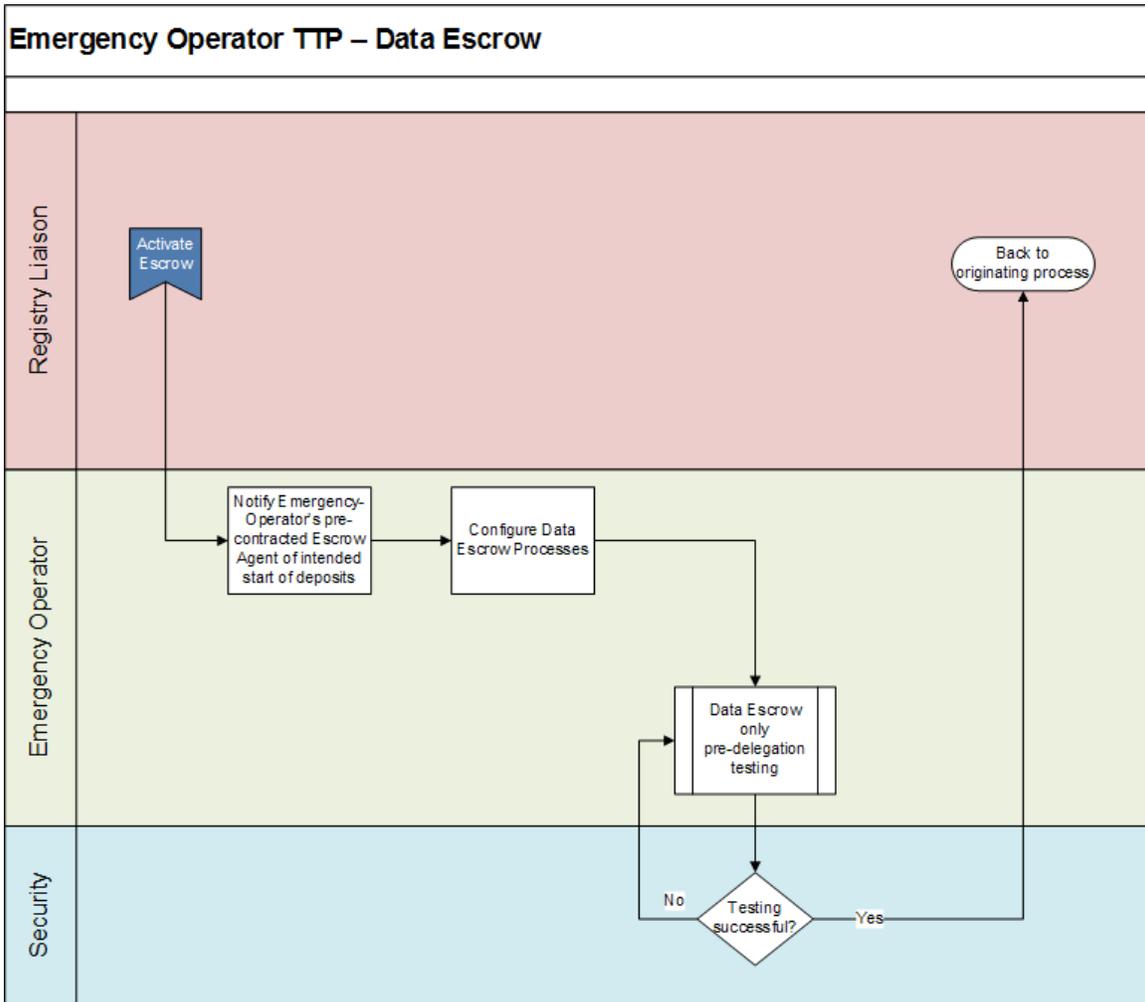


Process not yet developed

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

