REC #	SSR2 Recommendation	Directed To	Board Action
3.1	The Executive C-Suite Security Officer (see SSR2 Recommendation 2: Create a C-Suite Position Responsible for Both Strategic and Tactical Security and Risk Management) should brief the community on behalf of ICANN org regarding ICANN org's SSR strategy, projects,	ICANN org	The Board rejects Recommendations 3.1, and approves Recommendations 3.2 and 3.3 which can be considered as fully implemented. As the successful implementation of Recommendation 3.1 relies on Recommendation 2 that the Board rejected in July 2021. Recommendation 3.1 capped by approved
	and budget twice per year and update and publish budget overviews annually.		in July 2021, Recommendation 3.1 cannot be approved. The Board notes that the successful implementation of Recommendations 3.2 and 3.3 could be considered independent from Recommendation 2.
	SSR2 designated priority: High SSR2 designated owner: ICANN org		The Board acknowledges the existing transparency around the organization's budget, and public comment
3.2	The ICANN Board and ICANN org should ensure specific budget items relating to ICANN org's performance of SSR-related functions are linked to specific ICANN Strategic Plan goals and objectives. ICANN org should implement those mechanisms through a consistent, detailed, annual budgeting and reporting process.	ICANN Board, ICANN org	framework about the strategic and operating planning cycle. The Board agrees with the benefit of having periodic communication on SSR activities, including seeking public comments, and notes that this is already performed as part of the current annual planning process. The Board encourages ICANN org to continue enhancing its periodic communication on SSR activities as part of its work and operations. Furthermore, the Board fully advocates the transparency of the organization's activities that enhance the
	SSR2 designated priority: High SSR2 designated owner: ICANN Board and ICANN org		security, stability and resiliency of the DNS. In the interest of such transparency, ICANN org's <u>Operating and Financial Plans for FY22-26 (Five-Year) and FY22 (One-Year)</u> , includes "Appendix C: ICANN Security, Stability, and Resiliency (SSR) of the Unique Internet Identifiers".
3.3	The ICANN Board and ICANN org should create, publish, and request public comment on detailed reports regarding the costs and SSR-related budgeting as part of the strategic planning cycle.	ICANN Board, ICANN org	As SSR-related functions and their budget are part of the overall ICANN org Strategic and Operating Plan cycles, Recommendations 3.2 and 3.3 can be considered as fully implemented.
	SSR2 designated priority: High SSR2 designated owner: ICANN Board and ICANN org		

REC #	SSR2 Recommendation	Directed To	Board Action
4.3	ICANN org should name or appoint a dedicated, responsible person in charge of security risk management that will report to the C-Suite Security role (see SSR2	ICANN org	The Board rejects Recommendation 4.3 as its feasibility depends on Recommendation 2 which the Board rejected.
	Recommendation 2: Create a C-Suite Position Responsible for Both Strategic and Tactical Security and Risk Management). This function should regularly update,		The Board considers that security risks are already adequately considered, evaluated, managed, mitigated, both independently and in consideration of other risks, including the evaluation of the prioritization of resource

REC #	SSR2 Recommendation	Directed To	Board Action
	and report on, a register of security risks and guide ICANN org's activities. Findings should feed into BC and DR plans and procedures (see SSR2 Recommendation 7: Improve		allocation for mitigation actions. Moreover, existing reporting mechanisms allow for effective transparency and accountability of the management of all risks, not only security-related risks.
	Business Continuity and Disaster Recovery Processes and Procedures) and the Information Security Management System (ISMS) (see SSR2 Recommendation 6: Comply with Appropriate Information Security Management Systems and Security Certifications).		The Board notes that org has a Risk Management department as well as a Risk Management Framework which creates a holistic view of the most significant risks to the organization's mission, unifies risk management activities across the organization and provides assurance to Executive Management and the Board that the organization is operating safely in support of ICANN's mission. Additionally, ICANN org has a Board adopted Risk Appetite Statement which articulates the level of risk which ICANN org is willing to take and retain on a broad level to fulfil its mission. The Board also notes that the Committee of Sponsoring Organisations (COSO)
	SSR2 designated priority: High SSR2 designated owner: ICANN org		framework applied by org for risk management activities is appropriate for ICANN's needs.

REC #	SSR2 recommendation	Directed To	Board Action
5.3	ICANN org should require external parties that provide services to ICANN org to be compliant with relevant security standards and document their due diligence	ICANN org	The Board approves Recommendation 5.3 subject to prioritization, risk assessment and mitigation, costing and implementation considerations.
	regarding vendors and service providers. SSR2 designated priority: High SSR2 designated owner: ICANN org		The Board notes that to complete this recommendation, ICANN org, when renegotiating its one-year based contracts with external service-provider parties, would need to include a clause on compliance with relevant security standards.
	Jeria de la constant		The Board notes that ICANN org's Engineering & Information Technology (E&IT) function already requires all appropriate vendors and service providers to have a risk assessment performed and documented by E&IT's Security and Network Engineering Department which meets ICANN' orgs needs as instructed by industry-standard practices.

REC #	SSR2 Recommendation	Directed To	Board Action
6.1	ICANN org should proactively promote the voluntary	ICANN org	The Board rejects Recommendation 6.1.
	adoption of SSR best practices and objectives for		
	vulnerability disclosure by the contracted parties. If		The Board notes and supports the continued efforts for all parties to adopt Best Common Practices (BCP).
	voluntary measures prove insufficient to achieve the		
	adoption of such best practices and objectives, ICANN org		While the Board agrees with the intent of this recommendation, the Board notes that the SSR2 Implementation
	should implement the best practices and objectives in		Shepherds provided examples of certifications of standards bodies such as ISO/IEC 27001:2013 and/or ISO
	contracts, agreements, and MOUs.		22301:2012 in response to org's question. The Board cannot unilaterally impose such a requirement on the

REC #	SSR2 Recommendation	Directed To	Board Action
	SSR2 designated priority: High SSR2 designated owner: ICANN org		business practices of each registry. It would be outside of the Board's remit to require compliance to particular standards and standards bodies. Furthermore, the recommendation states that if BCPs are not voluntarily adopted by contracted parties, ICANN org should implement the BCPs and objectives in contracts, agreements, and Memorandums of Understandings (MOUs). This calls for work or outcomes that are outside of the Board's remit to direct, and are contingent on community work. Changes to contracted party agreements would be a matter of policy or a result of voluntary negotiations between ICANN org and contracted parties. The Board encourages ICANN org to pursue its continued promotion of initiatives that support and encourage voluntary adherence to current BCPs.

REC #	SSR2 Recommendation	Directed To	Board Action
6.2	ICANN org should implement coordinated vulnerability disclosure reporting. Disclosures and information regarding SSR-related issues, such as breaches at any contracted party and in cases of critical vulnerabilities discovered and reported to ICANN org, should be communicated promptly to trusted and relevant parties (e.g., those affected or required to fix the given issue). ICANN org should regularly report on vulnerabilities (at least annually), including anonymized metrics and using responsible disclosure. SSR2 designated priority: High SSR2 designated owner: ICANN org	ICANN org	The Board rejects Recommendation 6.2. The Board agrees with the SSR2 Review Team on the importance of having a process in place for coordinated vulnerability disclosure reporting. ICANN org discloses major security vulnerabilities and resulting incidents that cause significant risk to the security of ICANN's systems, or to the rights and interests of data subjects, or otherwise require disclosure under applicable legal requirements. Any disclosures ICANN org may make in terms of an incident is based on ICANN org's own incident reporting process, including the Cybersecurity Transparency Guidelines as well as the Coordinated Vulnerability Disclosure Reporting Framework . ICANN org also maintains a Cybersecurity Incident Log at https://www.icann.org/cybersecurityincidentlog . ICANN org reviews and updates these Guidelines and Framework on an ongoing basis. Based on the SSR2 Implementation Shepherds' clarification on the intent of the recommendation, the Board finds that the existing framework is sufficient in meeting Recommendation 6.2 as it relates to vulnerabilities that would affect ICANN's systems.
			With respect to a process for disclosures and information regarding SSR-related issues, such as "breaches at any contracted party" and reporting to "trusted and relevant parties," the Board notes that obligating such a disclosure process on contracted parties would require modifications to contracted party agreements. Such changes to contracted party agreements would be a matter of policy or a result of voluntary negotiations between ICANN org and contracted parties, and not something ICANN org or Board can unilaterally impose in agreements.

REC #	SSR2 Recommendation	Directed To	Board Action
	ICANN org should establish a Business Continuity Plan for all the systems owned by or under the ICANN org purview,		

REC #	SSR2 Recommendation	Directed To	Board Action
#	based on ISO 22301 "Business Continuity Management," identifying acceptable BC and DR timelines. SSR2 designated priority: Medium-High SSR2 designated owner: ICANN org		The Board approves Recommendations 7.1, 7.2, and 7.3 as complete, and approves Recommendation 7.5 subject to prioritization, risk assessment and mitigation, costing and implementation considerations. The Board rejects Recommendation 7.4. With regards to Recommendations 7.1, 7.2, 7.3, the Board notes that ICANN org is following the Contingency
7.2	ICANN org should ensure that the DR plan for Public Technical Identifiers (PTI) operations (i.e., IANA functions) includes all relevant systems that contribute to the security and stability of the DNS and also includes Root Zone Management and is in line with ISO 27031. ICANN org should develop this plan in close cooperation with the Root Server System Advisory Committee (RSSAC) and the Root Server Operators (RSO). SSR2 designated priority: Medium-High SSR2 designated owner: ICANN org	ICANN org	Planning guide for Federal Information Systems (NIST SP 800-34 Rev 1) which is a more integrated approach with, and given, ICANN org's existing plans and processes. ICANN org does not plan to introduce ISO standards in its processes. With respect to Recommendation 7.5, the Board directs org to publish current appropriate summary information of the established Contingency and Continuity Plan (CCOP) and the Disaster Recovery (DR) Plan which covers all ICANN systems which are tested annually by ICANN org's E&IT Function. As it relates to Recommendation 7.4, the Board notes that the SSR2 Implementation Shepherds clarified that the scope of Recommendation 7.4 was strictly the key management facilities for the DNSSEC Root KSK, and that the main objective was to provide diversity of the jurisdiction of the facilities. The Board cannot justify the cost of
7.3	ICANN org should also establish a DR Plan for all the systems owned by or under the ICANN org purview, again in line with ISO 27031. SSR2 designated priority: Medium-High SSR2 designated owner: ICANN org	ICANN org	building and maintaining an additional key management facility, knowing the level of required effort and constraints, as the possible benefit seems to be based on a perception that new non-U.S. physical construction would enhance diversity and address disaster recovery scenarios in a meaningful way. For the reasons stated above, the Board is rejecting Recommendation 7.4.
7.4	ICANN org should establish a new site for DR for all the systems owned by or under the ICANN org purview with the goal of replacing either the Los Angeles or Culpeper sites or adding a permanent third site. ICANN org should locate this site outside of the North American region and any United States territories. If ICANN org chooses to replace one of the existing sites, whichever site ICANN org replaces should not be closed until the organization has verified that the new site is fully operational and capable of handling DR of these systems for ICANN org. SSR2 designated priority: Medium-High SSR2 designated owner: ICANN org	ICANN org	
7.5	CANN org should publish a summary of their overall BC and DR plans and procedures. Doing so would improve transparency and trustworthiness beyond addressing	ICANN org	

REC #	SSR2 Recommendation	Directed To	Board Action
	ICANN org's strategic goals and objectives. ICANN org should engage an external auditor to verify compliance with these BC and DR plans.		
	SSR2 designated priority: Medium-High SSR2 designated owner: ICANN org		

REC #	SSR2 Recommendation	Directed To	Board Action
11.1	The ICANN community and ICANN org should take steps to ensure that access to CZDS data is available, in a timely manner and without unnecessary hurdles to requesters, e.g., lack of auto-renewal of access credentials. SSR2 designated priority: Medium SSR2 designated owner: ICANN community and ICANN org	ICANN community, ICANN org	The Board approves Recommendation 11.1 and notes it as complete. The Board notes that the primary concern described in Recommendation 11.1 appears to be a perceived difficulty to access Centralized Zone Data Service (CZDS) data when needed. The SSR2 Review Team cited the overall number of Zone File Access (ZFA) complaints and issues such as a "lack of auto-renewal" for CZDS credentials. In its initial action on this recommendation, the Board noted that this recommendation aligns with recommendations in SAC097, Security and Stability Advisory Committee (SSAC) "Advisory Regarding the Centralized Zone Data Service (CZDS) and Registry Operator Monthly Activity Reports" and deferred further action on this recommendation pending clarification from the SSR2 Implementation Shepherds. The SSR2 Implementation Shepherds' reiterated concerns related to access and the number of ZFA complaints. The Board notes the success measures for this recommendation state: "This recommendation can be considered implemented when ICANN org and the community makes access to CZDS data available in a timely manner and without unnecessary hurdles to requesters" [], "when ICANN org reports a decrease in the number of zone file access complaints and improves the ability for researchers to study the security-related operations of the DNS." Based on input from ICANN org, the Board believes that access to CZDS data has been improved. ICANN Contractual Compliance has noted that the total volume of complaints received has been decreasing and has remained consistently lower over the past year. The Board believes that the ongoing and completed work to date on the CZDS, conducted to address SAC097, meets the requirements of Recommendation 11.1.
REC #	SSR2 Recommendation	Directed To	Board Action
16. 2	ICANN org should create specialized groups within the contract compliance function that understand privacy requirements and principles (such as collection limitation, data qualification, purpose specification, and security	ICANN org	The Board rejects Recommendations 16.2 and 16.3. The Board notes that the SSR2 Implementation Shepherds would like ICANN org to form specialized groups within ICANN org's Contractual Compliance that understand privacy requirements and principles, to provide
	uata qualification, purpose specification, and security		within 10Aiviv org 5 Contraction Compliance that understand privacy requirements and principles, to provide

REC #	SSR2 Recommendation	Directed To	Board Action
	safeguards for disclosure) and that can facilitate law enforcement needs under the RDS framework as that framework is amended and adopted by the community (see also SSR2 Recommendation 11: Resolve CZDS Data Access Problems).		legal expertise and support for law enforcement and consumer protection representatives during the evolution of the RDS framework. ICANN org's Contractual Compliance already has subject matter experts in multiple areas, including those enumerated by the SSR2 Implementation Shepherds, who contribute to policy development when requested by the ICANN community.
	SSR2 designated priority: Medium SSR2 designated owner: ICANN org		The Board notes that the SSR2 Implementation Shepherds' feedback indicates that these new groups under ICANN org's Contractual Compliance should require registrars to publish their privacy policies and procedures, and track them. ICANN org agreements with registries and registrars do not specifically require registrars to
16. 3	ICANN org should conduct periodic audits of adherence to privacy policies implemented by registrars to ensure	ICANN org	have "privacy policies."
	that they have procedures in place to address privacy breaches.		The Board finds that Recommendation 16.2 is not within ICANN's scope and its contractual agreements with registries and registrars. It would be a matter of policy or a result of voluntary negotiations between ICANN org and contracted parties, and not something ICANN org or Board can unilaterally impose.
	SSR2 designated priority: Medium		
	SSR2 designated owner: ICANN org		With respect to Recommendation 16.3, ICANN org's Contractual Compliance cannot carry out any audit on or enforce compliance with something that is not an ICANN contractual requirement.

REC #	SSR2 Recommendation	Directed To	Board Action
18.1	relevant observations that may pertain to recommendations for actions, including changes to	ICANN org	The Board rejects Recommendations 18.1, 18.2 and 18.3. The Board considers that ICANN org is already taking appropriate measures to ensure that any emerging or evolving technology within ICANN's scope is evaluated appropriately and followed up on as needed. The Board notes that there are organizations and research communities that already perform many of the acti as described in the recommendations. The Board determined that the benefits do not outweigh the costs for ICANN org to act as a proxy to the work of those organizations and communities. Much of the work within the academia and research communities are; a) conceptual or experimental, resulting in no real change to the protocols or technologies that ICANN has within its remit, and b) there is a significant amount of work being do unrelated to the DNS or other Internet unique identifiers that are within ICANN's remit. The Board recognizes that ICANN org staff follow or participate in many operational and development forums, such as: Internet Engineering Task Force (IETF), Network Operators Groups (NOGs), Network Information Centers (NICs), the Registration Operations Workshop (ROW) and academic forums such as the Institute of Electrical and Electronics Engineers Technical Committee on Security and Privacy (IEEE S&P), and Advanced
	contracts with registries and registrars, that could mitigate, prevent, or remedy SSR harms to consumers and infrastructure identified in the peer reviewed literature. SSR2 designated priority: Low SSR2 designated owner: ICANN org		Computing Systems Association (USENIX) among others. Such forums are a place in which conceptual or experimental emerging or evolving technologies tend to appear when the concept has matured enough for real-world testing or evaluation prior to being implemented into new standards or technologies. When such a concept or technology rises to that level, ICANN org evaluates the technology relative to ICANN's mission and may take an action relative to the technology. Such actions may take the form of a publication (OCTO document, White Paper, Blog Post, etc), to be discussed within groups such as the SSAC, RSSAC, the Special Interest Forum on Technology (SIFT), or through inviting developers of these emerging or evolving technologies to present their
18.3		ICANN org	work to the wider ICANN community through the Emerging Identifier Technology sessions at ICANN meetings. The Board notes that there are other entities within the Internet community in which similar work takes place with no or very little barrier to entry. These other entities, such as IETF, International Telecommunication Union Standards Sector (ITU-T), World Wide Web Consortium (W3C), and others, perform similar actions as described above within their own remit. If such work overlaps with the ICANN mission, there are opportunities for collaboration between the respective groups to evaluate and work on emerging or evolving technologies.
	SSR2 designated priority: Low SSR2 designated owner: ICANN org		Finally, the Board wishes to highlight that the recommendations, as written, call for unbound work which is deemed as a critical element for their implementation. The list of places to monitor for these conceptual papers is exhaustive and beyond the list of the examples in the recommendation. ICANN org focuses its work on protocols and technologies that are implementable, have a potential impact on the ICANN ecosystem, and are within the narrow scope of the ICANN mission.

REC #	SSR2 Recommendation	Directed To	Board Action
			The Board supports the idea of continuing to follow such emerging or evolving technologies as described above and invites the community to raise awareness of any such technology or protocol that they feel ICANN org should pay particular interest.

Rec #	SSR2 Recommendation	Directed To	Board Action
20.	ICANN org should establish a formal procedure, supported by a formal process modeling tool and language to specify the details of future key rollovers, including decision points, exception legs, the full control-flow, etc. Verification of the key rollover process should include posting the programmatic procedure (e.g., program, finite-state machine (FSM)) for public comment, and ICANN org should incorporate community feedback.	ICANN org	The Board rejects Recommendations 20.1 and 20.2. While the Board agrees with some elements of 20.1 and 20.2 (such as procedures and activities for future key rollovers), the Board does not have the option of selectively approving some parts and rejecting other parts of a single, indivisible community recommendation. Recommendation 20.1 calls for ICANN org to pursue a novel model that cannot be implemented with existing resources and expertise. The Board notes that ICANN org had proposed an alternative process that would still
	The process should have empirically verifiable acceptance criteria at each stage, which should be fulfilled for the process to continue. This process should be reassessed at least as often as the rollover itself (i.e., the same periodicity) so that ICANN org can use the lessons learned to adjust the process.		resources and expertise. The Board notes that ICANN org had proposed an alternative process that would still contain evaluation checkpoints that allow circumstances to be assessed and provide for a potential course correction. The SSR2 Implementation Shepherds pointed to research done in the medical field, noting that it could be replicated in the DNSSEC Root Key management, but did not provide evidence of this approach having been researched or used in fields with direct applicability to the org's processes. The Board does not recommend developing such a complex and specific model based on speculative outcomes that were not researched in the DNSSEC Root Key Management.
	SSR2 designated priority: Medium SSR2 designated owner: ICANN org		The Board notes that rejecting Recommendation 20.1 impacts the feasibility of Recommendation 20.2.
	20.2: ICANN org should create a group of stakeholders involving relevant personnel (from ICANN org or the community) to periodically run table-top exercises that follow the Root KSK rollover process.		The Board notes, however, that the FY23 IANA Operating Plan & Budget documents the org's commitment to initiate a study on algorithm rollovers. As of October 2022, ICANN org has commissioned an independent contractor to lead this research and they will work in close coordination with the community and ICANN org's DNSSEC experts. In addition, the FY24 IANA Operating Plan & Budget identified the next key rollover as one of its operating priorities.
	SSR2 designated priority: Medium SSR2 designated owner: ICANN org		
20. 2	ICANN org should create a group of stakeholders involving relevant personnel (from ICANN org or the	ICANN org	

Rec #	SSR2 Recommendation	Directed To	Board Action
	community) to periodically run table-top exercises that		
	follow the Root KSK rollover process.		
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	SSR2 designated priority: Medium		
	SSR2 designated owner: ICANN org		

Rec #	SSR2 Recommendation	Directed To	Board Action
24.	ICANN org should coordinate end-to-end testing of the full EBERO process at predetermined intervals (at least annually) using a test plan that includes datasets used for testing, progression states, and deadlines, and is coordinated with the ICANN contracted parties in advance to ensure that all exception legs are exercised, and publish the results. SSR2 designated priority: Medium SSR2 designated owner: ICANN org	ICANN org	The Board approves Recommendation 24.1 and notes it as complete. The Board notes clarification received from the SSR2 Implementation Shepherds that it is not intended for testing to be conducted on currently active TLDs with registrations. The Board notes that ICANN org's previously conducted testing on gTLDs that were in the process of terminating their registry agreements. Although these gTLDs did not have registrants, they could be considered "live." These tests allowed for ICANN to demonstrate the effectiveness and proper functioning of the EBERO process as well as fully review the process for issues and areas for improvement. The Board also notes that, in ICANN org agreements with the EBERO service providers, there is a provision which allows for EBERO Readiness Exercises to be conducted annually. These agreements also contain a full test plan and expectations from the EBERO service provider. Regarding "coordination with the ICANN contracted parties," the Board notes that, since the testing of the EBERO process would not involve a currently active TLD with registrations, as confirmed by the SSR2 Implementation Shepherds, coordination with the contracted parties is not necessary, and, additionally, in the case of an EBERO event, a contracted party would not be willing or able to participate. However, as was the case with the testing exercises noted above, ICANN org would coordinate any future such tests with the Registry Operators. In light of this analysis, the Board believes that the existing agreements, including provisions for readiness exercises, as well as past tests, meet the requirements and success measures of this recommendation.