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**Advice requested by the ICANN Board
regarding definitions, measures, and targets
for competition, consumer trust and consumer choice**

Prepared by the Consumer Trust Working Group,
for the ALAC, GAC, ccNSO, and GNSO consideration

Background

This advice was drafted in response to an ICANN Board resolution asking for definitions and metrics that will be used to evaluate the gTLD expansion program in a post-launch review required under the [Affirmation of Commitments](#)¹.

ICANN and the US National Telecommunications and Information Administration (NTIA) signed the Affirmation of Commitments (AOC) on 30-Sep-2009. Article 3.c of the AOC is a commitment to *“promote competition, consumer trust, and consumer choice in the DNS marketplace”*.

Article 9.3 expanded on this and committed ICANN to *“adequately address” “competition, consumer protection, security, stability and resiliency, malicious abuse issues, sovereignty concerns, and rights protection” “prior to implementation”*.

Article 9.3 also committed ICANN to perform a review one year after the first new gTLD was delegated, to *“examine the extent to which the introduction or expansion of gTLDs has promoted competition, consumer trust and consumer choice”*.

Community discussions during the AOC review of Accountability and Transparency included calls for *metrics* – objective measures that could be used to assess ICANN’s performance on key aspects of accountability and transparency. Moreover, it was argued that such metrics would help ICANN management to focus its efforts in ways that would measurably improve performance. In that vein, several community members encouraged ICANN’s Board to establish metrics for other AOC reviews and commitments, including public interest, consumer trust, competition, and consumer choice.

¹ Affirmation of Commitments: <http://www.icann.org/en/documents/affirmation-of-commitments-30sep09-en.htm>

Since the AOC did not define the terms or measures of competition, consumer trust and consumer choice, the ICANN Board resolved in December 2010 to request advice from the ALAC, GAC, GNSO and ccNSO on establishing the definition, measures, and three year targets for those measures, for competition, consumer trust and consumer choice. The ICANN Board [resolution](#)² (2010.12.10.30) reads as follows:

Whereas, ICANN has committed to promoting competition, consumer trust and consumer choice in the Affirmation of Commitments

Whereas, if and when new gTLDs (whether in ASCII or other language character sets) have been in operation for one year, ICANN has committed to organize a review that will examine the extent to which the introduction or expansion of gTLDs has promoted competition, consumer trust and consumer choice.

Resolved, the ICANN Board requests advice from the ALAC, GAC, GNSO and ccNSO on establishing the definition, measures, and three year targets for those measures, for competition, consumer trust and consumer choice in the context of the domain name system, such advice to be provided for discussion at the ICANN International Public meeting in San Francisco from 13-18 March 2011.

In response to that ICANN Board resolution, community members in the GNSO, ccNSO and ALAC began to organize a working group at the Singapore meeting in June 2011. The Working Group invited the GAC to participate and welcomes GAC response to this draft advice.

The Consumer Trust, Choice, and Competition Working Group was chartered first by the GNSO Council on 7 September 2011. It was intended that the Charter ([link](#))³ could also be formally endorsed by the ALAC, GAC and ccNSO, but their endorsement was not a requirement for participation in the Working Group. The charter Drafting Team understood that its goal was to produce advice for consideration by the GNSO, ccNSO, GAC and ALAC, each of which was asked for advice as part of the ICANN Board resolution discussed above. Each AC/SO may act independently on the Working Group's draft advice, and may endorse all, part, or none of the draft advice as it decides how to respond to the ICANN Board resolution.

The Working Group understands that the purpose of this advice is to provide the ICANN Board with definitions, measures, and targets that could be useful to the Affirmation review team that will convene one year after new gTLDs are launched. However, the Working Group understands that this advice cannot pre-determine or otherwise limit the scope of the future Affirmation review team. Additionally, this advice is not intended to recommend policy changes or policy development needs.

² Consumer Trust ICANN Board Resolution: <http://www.icann.org/en/minutes/resolutions-10dec10-en.htm#6>

³ Consumer Metrics Charter: <https://community.icann.org/display/CMG/3.++WG+Charter>

The advice does not consider any potential consequences of measuring performance, but is only an attempt to identify metrics per the ICANN Board resolution. Further, the recommendations for any given metric or target do not convey new legal accountability or responsibility on ICANN or Contracted Parties.

The WG attempted to stay true to the ICANN Board resolution and the Affirmation of Commitments by recommending metrics that can be measured and that will contribute to the required assessment of the new gTLD program and how it promoted Consumer Trust, Consumer Choice, and Competition.

In addition, the Working Group anticipates that the ICANN Board may want to have definitions, measures, and targets established early enough to become part of ICANN's management objectives as it evaluates new gTLDs this year. The Working Group recommends that ICANN staff begin to collect appropriate measures and publish baseline data as soon as the ICANN Board has acted on advice from ACs and SOs.

The ICANN Board should also consider the resource requirements for collecting new metrics, both in terms of internal staff and expense for external third-party assistance with surveys and other data collection efforts.

Lastly, it is essential when reviewing this advice that the definitions of each term be considered when reviewing the metrics. Both are complements to each other and context can be lost if they are considered alone.

Scope of this Advice

The Working Group Charter adopted a limited scope for this advice, citing the ICANN Board resolution seeking advice on definitions and metrics for the gTLD expansion review that is required in the Affirmation of Commitments.

The Working Group acknowledges that the limited scope it has undertaken provides only a partial evaluation of all choices from the Internet end-user point of view. Considering this perspective, a full examination of choice should not only measure the diversity within registries and registrars, but also examine options whereby users access internet resources without knowing the TLD, or without direct use of the DNS altogether.

Alternate methods of accessing Internet content and services (mobile apps, search engines, social portals, QR codes, etc.) are growing in popularity and themselves present innovative and competitive threats to ICANN-regulated TLDs. As such, they should be considered in any complete evaluation of consumer trust, consumer choice, and competition related to ICANN in general and new gTLDs specifically.

The Governmental Advisory Committee (GAC) has previously stated its view that the benefits of any gTLD expansion should exceed its costs. In comments on the Draft Advice, the US Government reiterated this position, suggesting that the WG develop metrics sufficient to measure the actual benefits and costs of the expansion program. The WG notes that neither the ICANN Board resolution nor the Affirmation of Commitments requires a comprehensive assessment and comparison of benefits versus costs of the expansion. Nonetheless, the WG developed many metrics designed to generate useful data on benefits and costs of the gTLD expansion program.

Community Representation on the Working Group

The Working Group on Consumer Trust, Choice, and Competition was formed to respond to an ICANN Board resolution regarding a review of the new gTLD program, as required under the Affirmation of Commitments. Names of Working Group participants and ICANN staff are listed in Appendix A. The list includes representatives of the ALAC, CBUC, IPC, NCSG, RySG, RrSG, NCA groups, as well as individual participants.

The WG achieved Consensus, as defined in WG Guidelines⁴ "Consensus - a position where only a small minority disagrees, but most agree". The dissenting positions of two WG members are included in Appendix D, along with a response to that dissent from another WG member..

Process for developing this Advice

The Working Group began regular meetings after the Singapore meeting in June 2011. Working Group members drafted a charter for consideration by any and all community groups from whom the ICANN Board solicited advice. The Charter was approved by the GNSO on 7 September 2011 and is available [here](#)⁵.

In addition to its bi-weekly conference calls, the working group held public discussion sessions at several ICANN meetings, including regular briefings for the GNSO Council. At the Prague meeting, the WG gave a briefing to the GAC at its open session.

The initial draft of advice was approved by the Working Group on 22 February 2012 and forwarded to ICANN staff to post for public comment. The Working Group assessed and deliberated on the comments received to construct this final version of Advice for delivery to the ICANN Board. This advice will also be shared with the ALAC, GAC and ccNSO for their consideration, as they may also be developing advice pursuant to the ICANN Board's Dec-2010 resolution.

⁴ GNSO Working Group Guidelines: <http://gnso.icann.org/council/annex-1-gnso-wg-guidelines-08apr11-en.pdf>

⁵ Consumer Metrics Charter: <https://community.icann.org/display/CMG/3.++WG+Charter>

Advice on Definitions

As its initial task, the Working Group considered definitions for Consumer Trust, Competition, and Consumer Choice in the context of the DNS and ICANN's gTLD expansion program. As a threshold matter, the working group established this definition of *consumer*, which is critical to two of the three defined terms:

Consumer is defined as actual and potential Internet users and registrants.

Consistent with the *Affirmation of Commitments*, this definition of *Consumer* is designed to focus on the interests of anyone or any entity taking the role of an Internet user or domain name registrant.

The definition focuses not on the nature of an entity, but rather on the *role* it plays by using the DNS to do resolutions or to register a domain name. Therefore, any entity can be regarded as a consumer, including individuals, businesses, governments, non-profits, etc. When any of these entities are also playing other roles with respect to the DNS – such as a registry operator or registrar – their interests are not relevant to this definition.

Including the above definition of *Consumer*, the working group recommends these definitions for the key terms in the AOC and the ICANN Board resolution:

Consumer is defined as actual and potential Internet users and registrants.

Consumer Trust is defined as the confidence Consumers have in the domain name system. This includes (i) trust in the consistency of name resolution (ii) confidence that a TLD registry operator is fulfilling the Registry's stated purpose and is complying with ICANN policies and applicable national laws and (iii) confidence in ICANN's compliance function.

Consumer Choice is defined as the range of options available to Consumers for domain scripts and languages, and for TLDs that offer meaningful choices as to the proposed purpose and integrity of their domain name registrants.

Competition is defined as the quantity, diversity, and the potential for and actual market rivalry of TLDs, TLD registry operators, and registrars.

Notes on these definitions:

Note 1. The term “Consumer” was specifically used in the Affirmation and the ICANN Board resolution that created this WG. The WG defines “Consumer” as “actual and potential users and registrants”. Some commenters believe that the correct term to use in all publications instead of “Consumer” should be “Internet User” and “Consumers” as “Internet Users” whether they are registrants or not.

Note 2. The Consumer Trust definition has three aspects:

First, Internet users need confidence in the reliability and accuracy of the resolution of domain names they reference in email addresses, apps, and web browsing.

Second, registrants of domain names need confidence that the TLD registry they have selected will actually fulfill its proposed purpose and promises that drove their selection. For example, a bank that invests in moving its registrations to the .bank gTLD wants to be able to trust that .bank will honor its promise to allow only legitimate banks to hold domain names. The registrant will also trust that ICANN will hold the gTLD operator to its promises, ICANN policies, and any applicable national laws.

Third, consumers need to have confidence in the efforts of registry operators and registrars to curtail abuse and to ensure respect for intellectual property rights, prevent fraud, crime, and other illegal conduct, as well as confidence that ICANN will enforce requirements imposed on Registry operators and Registrars to prevent these abuses. If consumers believe that new gTLDs are failing to prevent these abuses, then consumers will lose trust in the domain name system.

Trustor (who trusts)	Trustee (who/what is trusted)	Aspects (trust with respect to)
Registrants and users (referred to as “consumers” in the Affirmation)	The overall domain name system	All aspects, including consistency of name resolution
	TLD registry operator	Fulfilling its stated purpose and complying with ICANN policies and applicable national laws
	ICANN, Registries and Registrars	Efforts to curtail susceptibility to abuse of the domain name system

Trustor (who trusts)	Trustee (who/what is trusted)	Aspects (trust with respect to)
	ICANN	Ability to enforce requirements imposed on registrars and registry operators, including respect for intellectual property rights and avoidance/minimization efforts relating to fraud, crime, or other illegal conduct.

Note 3. A minority of WG members objected to the inclusion of “national laws” in the definition of Consumer Trust. Advocates of including the term argued that governments and the GAC expect ICANN and its contract parties to respect applicable national laws, citing several of ICANN’s foundational documents:

- *Articles of Incorporation: “The Corporation shall operate for the benefit of the Internet community as a whole, carrying out its activities in conformity with relevant principles of international law and applicable international conventions and local law”*
- *Applicant Guidebook: “National Law” is cited as potential basis for Government objections, GAC Early Warning, and/or GAC advice*
- *Affirmation of Commitments: “9.3.1 ICANN additionally commits to enforcing its existing policy relating to WHOIS, subject to applicable laws”*
- *Bylaws: regarding ccTLDs: “provided that such policies do not conflict with the law applicable to the ccTLD manager”*

In addition, a set of 2011 working papers from the European Commission also cited the importance of national laws, indicate the political lens through which the new gTLD program will be judged by governments.

Note 4. In the definition of Consumer Choice, “Meaningful” choices for registrants is when they have the option of choosing among TLDs that are relevant to the registrant’s domain name, at reasonable prices and with expectations of quality of service by the registry operator. For Internet users, “Meaningful” choices would be evident when they are choosing from competing hyperlinks displayed in search results, referrals, advertisements, etc., in that a TLD could convey something about the context, content, and quality of the linked resource.

Note 5. Competition is closely related to the idea of Consumer Choice. The WG adopted a distinction in that Consumer Choice is evident in

the quality and diversity of TLD choices available to registrants and users. Competition is evident when multiple suppliers are competing in terms of the quality, price, and diversity of TLDs they offer. Competition can take many forms, one of which is price, and the community should not begin with the expectation that the principle of competition in the new gTLD space will be based on price alone. In addition to changes in price, competition could instead be based on security, abuse protection, and other differentiators that registries choose to offer.

Note 6. The definition of Competition looks at all TLDs, not just gTLDs. The working group recognizes that ccTLDs are potential competitors to gTLDs.

Note 7. Competition leads to more efficient production and provides consumer benefits, such as improvements in pricing, operating quality, service, and consumer choice. However, the proliferation of new gTLDs may also impose costs on consumers and other market participants in the form of cybercrimes, fraud, consumer confusion, and defensive registrations, and it is not yet certain whether competition, or other controls, will eliminate or materially reduce these costs.

Note 8. All definitions are presented individually. However, these definitions need to be considered holistically in order to determine "the extent to which the introduction or expansion of gTLDs has promoted competition, consumer trust, and consumer choice" (Affirmation Para 9.3)

Advice on Measures and 3-Year Targets for Defined Terms

The ICANN Board resolution requests advice on measures for each of the three defined terms. Below are the working group's recommended measures, including columns indicating an assessment of difficulties in obtaining and reporting each measure, along with the source of data. The scope of the metrics is only at the first and second level registrations. Third and higher level registrations of domains are considered out of scope with exception of the use of geographic names as outlined in the Applicant Guide Book.

The ICANN Board resolution also requested advice on 3-year targets for these measures. For some measures, an appropriate target would be an improvement on performance in the pre-expansion gTLD space. For other measures, such as URS complaints, there is no exact equivalent in the pre-expansion gTLD environment.

The Working Group suggests that the ICANN Board ask ICANN staff to develop baseline values for any measure that applies to the pre-expansion

gTLD space, so that future targets can be stated in terms of any changes relative to present performance. For example, a 3-year target for UDRP Complaints in new gTLDs could be any of these:

Type of Target	Theoretical Example of a target for UDRP complaints
Annual total for all new gTLDs	Total UDRP complaints regarding new gTLDs should be fewer than 1000 per year.
Rate of incidence for new gTLDs (per 1000 registrations)	The rate of UDRP complaints in new gTLDs should be less than 1 for every 1000 registrations.
Relative to prior periods	The number of UDRP complaints for new gTLDs in 2015 should be less than 10% of the number of UDRP complaints in 2014.
Relative to legacy gTLDs	In 2015, the rate of UDRP complaints (per 1000 registrations) in the new gTLDs should be 50% lower than the rate in legacy gTLDs

Per the ICANN Board resolution request, the working group also recommended 3-year targets for measures where we had sufficient information to suggest appropriate targets. Notes about terms used in the tables of measures:

- “Legacy gTLDs” refers to gTLDs that were in operation before the present expansion. (i.e., before Jan-2012)
- “Registry Operator” refers to the entity holding the registry contract with ICANN.
- “Registry Service Provider” refers to a third-party entity providing comprehensive back-end technical operations for a Registry Operator. This term is not meant to include an Emergency Back End Registry Operator (EBERO).
- “Relative incidence” of a particular measure would divide the raw data by the total number of registrations in each gTLD zone evaluated. This is intended to put small or new gTLDs on a comparable basis with experience in larger or more established gTLDs.
- “Obtaining” refers the availability and level of effort to gather raw data needed for each measure in the table.
- “Reporting” refers to compiling and publicly disclosing data fir a given measure.

Definitions regarding measures and targets for open and closed gTLDs.

Specification 9 of the standard Registry Contract for new gTLDs is the “Registry Operator Code of Conduct” (shown in Appendix B). The Registry Code of Conduct requires open and non-discriminatory access to registrars and registrants seeking to register domain names. It also prohibits the registry operator from registering domains in its own right, subject to narrow exceptions.

To accommodate new gTLD operators who wish to maintain all domain name registrations in the TLD for their own exclusive use, ICANN may grant an exemption to this Code of Conduct. Conditions and criteria for ICANN to grant that exemption are set forth in paragraph 6 of the Code of Conduct.

In October 2012, several GNSO contracted parties suggested that the working group identify measures that do not apply to new gTLDs that are operating under this exemption to the Code of Conduct.

The working group adopted the following definitions to accommodate this request:

“Closed gTLD” refers to a gTLD where ICANN has granted the paragraph 6 exemption from Specification 9: Registry Operator Code of Conduct.

“Open gTLD” refers to a gTLD that has not been granted an exemption from Specification 9: Registry Operator Code of Conduct. Community TLDs and TLDs with self-imposed registrant restrictions would still be regarded as open gTLDs under this definition, unless they have been granted an exemption from the Registry Operator Code of Conduct.

“Closed Brand gTLD” refers to a closed gTLD where the TLD string is a Trademark held by the registry operator. (e.g. .Microsoft, .Google, .HSBC)

“Closed Keyword gTLD” refers to a closed gTLD where the TLD string is not a recognized Trademark held by the registry operator. (e.g. .search, .book, .music)

Measures of Consumer Trust

For reference, the definitions of Consumer and Consumer Trust are repeated here:

Consumer is defined as actual and potential Internet users and registrants.

Consumer Trust is defined as the confidence Consumers have in the domain name system. This includes (i) trust in the consistency of name resolution (ii) confidence that a TLD registry operator is fulfilling the Registry's stated purpose and is complying with ICANN policies and applicable national laws and (iii) confidence in ICANN's compliance function.

ALAC Notes:

Background (ALAC)

On February 28 2013, the [At-Large Advisory Committee approved a statement](#) in response to the GNSO report on metrics designed to evaluate the performance of ICANN's gTLD expansion program. The statement, which was sent as correspondence by ALAC Chair Olivier Crepin-Leblond to the Chair of the ICANN Board and the Chair of the Board gTLD Working Group, indicated that the GNSO report did not adequately address metrics that would accurately measure end-user benefits and trust resulting from the expansion. In the statement, the ALAC committed to produce recommendations for additional metrics which we believe are required to supplement the GNSO recommendations. The ALAC created a Task Force to create the new metrics, which are listed below.

Scope (ALAC)

The ALAC found the scope of metrics used by the GNSO to be too limiting to be effective in measuring end-user benefit and confidence. We believe that to be effective, the metrics must evaluate the gTLD program not only between the different registries, but between the use of domain names and alternate methods to access Internet information. We are concerned about the effect of the expansion program not only on the new gTLDs, but on public confidence in and of the the whole domain name system. It is possible that a reduction in confidence in new gTLDs could spill over to legacy registries which we believe metrics need to track.

The metrics proposed are intended to measure the gTLD expansion program from the point of view of Internet end-users, the ALAC's constituency as defined in ICANN bylaws. We assume that the needs of domain buyers and sellers are sufficiently addressed by the GNSO in its metrics. The metrics below supplement, not replace, the GNSO recommendations.

As the scope of ALAC and ICANN itself is global, we anticipate and expect that any metrics to be measured by survey (both the ALAC and GNSO metrics) would need to be globally distributed and multi-lingual

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
<i>Measures related to confidence in registrations and resolutions:</i>				
[1.1] % DNS Service Availability (present SLA is 100%).	ICANN	None noted	100%	Metric is feasible and useful.
[1.2] % Availability for Registration Data Directory Services (RDDS). (SLA is 98%).	ICANN	None noted	98%	Metric is feasible and useful.
[1.3] % of Service Availability for Shared Registration Services (SRS, using EPP). (SLA is 98%). Open TLDs only	ICANN	None noted	98%	Metric is feasible and useful.

<p>[1.4] Survey of perceived consumer trust in DNS, relative to experiences before the gTLD expansion. Survey could at least measure experiences with phishing, parking sites, malware and spam; confusion about new gTLDs; user experience in reaching meaningful second-level TLDs; registrant experience in being in a different gTLD; Registrant and Internet users' experience with regard to cybersquatting. Survey to be conducted every two years (biennial).</p>	<p>Survey Vendor</p>	<p>Moderate difficulty to gain consensus on survey questions. Survey cost is approx. \$100K.</p>	<p>Should show improvement on all survey measures</p>	<p>Combined with metrics 2.1, 2.2, 2.3, 2.10, 2.12, 2.13, 4.1, 4.2, 4.3, and 5.1 to be measured as part of the global consumer survey scheduled to launch in Oct. 2014. Note that questions related to trust should also include measures of awareness about new gTLDs, and DNS in general. Capture baseline of attitudes now – do not ask survey respondents to recall past attitudes. ICANN provides the following definitions as a starting point for the contracted vendor to refine these terms into clear, common-language definitions that can easily translate into other languages: Consumer: Actual Internet users and registrants, and potential registrants. Consumer trust: The confidence Consumers have in the domain name system. This includes (i) trust in the consistency of name resolution (ii) confidence that a TLD registry operator is fulfilling the Registry's stated purpose and is complying with ICANN policies and applicable national laws and (iii) confidence in ICANN's compliance function. Consumer choice: The range of options available to Consumers for domain scripts and languages, and for TLDs that offer meaningful choices as to the proposed purpose and integrity of their domain name registrants. Phishing: Using social and technical engineering to steal consumers' personal</p>
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			<p>identity data and financial account credentials.</p> <p>Malware: Short for malicious software, used to disrupt computer operations, gather sensitive information or gain access to private computer systems.</p> <p>Spam: Electronic junk mail or junk newsgroup postings. Some people define spam even more generally as any unsolicited email.</p> <p>Second-level domains: The data directly before the top-level domain (TLD). For example, in www.example.com, “example” represents the second level domain, as the suffix “.com” represents the TLD. The SLD is generally the portion of the URL that identifies the website's domain name.</p> <p>Cybersquatting: Registering, trafficking in, or using a domain name with bad faith intent to profit from the goodwill of a trademark belonging to someone else.</p> <p>Note: While the IAG-CCT proposed this as a starting point for a definition in the RFP for the global consumer survey, there was divergence in the group’s opinion on how narrowly to define cybersquatting. In particular, some group members indicated that measuring bad faith registrations would be difficult and potentially undiscernible to the average Internet user.</p> <p>gTLDs: A TLD (top-level domain) appears in a domain name as the string of letters following the last (right-most) dot, such</p>
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Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
				as “net” in www.example.net . A gTLD (generic TLD) is a TLD that does not correspond to any country code.
[1.5] % Uptime for Registrar services such as WHOIS, contact info, and complaints, assuming that SLAs are established for these measures in the new RAA.	Registrar	Doubtful that Registrars will compile and disclose uptime stats unless required by RAA	SLA in RAA	ICANN’s technical services team can provide data on this metric provided the SLAs are established and ICANN receives reportable data.
<i>Measures related to confidence that TLD operators are fulfilling their stated promises and complying with ICANN policies and applicable national laws (see note 3 on page 6):</i>				
[1.6] Relative incidence of breach notices issued to Registry operators for contract or policy compliance matters. All breach-related notifications should be counted.	ICANN	None noted	Significantly Lower for new gTLDs than for legacy gTLDs	Metric is feasible and useful.
[1.7] Relative incidence of breach notices issued to Registrars, for contract or policy compliance matters. All breach-related notifications should be counted, provided they reference one or more gTLD(s).	ICANN	None noted	Significantly Lower for new gTLDs than for legacy gTLDs	Metric is feasible and useful.
[1.8] Relative Incidence of Registry & Registrar general complaints submitted to ICANN’s Internic System.	ICANN	Maybe difficult to establish baseline on existing Internic data versus new system	Lower for new gTLDs than for legacy gTLDs	Metric is feasible and useful.
[1.9] Relative incidence of combined UDRP and URS <i>Complaints</i> . URS is required only in new gTLDs, so combined UDRP and URS complaints may be comparable to UDRP complaints in legacy gTLDs.	RPM Providers	Moderate difficulty obtaining data	Lower for new gTLDs than for UDRPs in legacy gTLDs	Metric is feasible and useful.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[1.10] Relative incidence of combined UDRP and URS <i>Decisions against registrants</i> . URS is required only in new gTLDs, so combined UDRP and URS decisions may be comparable to UDRP decisions in legacy gTLDs.	RPM Providers	Moderate difficulty obtaining data	Lower for new gTLDs than for UDRPs in legacy gTLDs	Metric is feasible and useful.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
<p>[1.11] Quantity of intellectual property claims and cost of domain name policing relating to new gTLDs, measured immediately prior to new gTLD delegation and at 1 and 3 years afterwards.</p> <p>Incidence of domain name IP cases should not include UDRP/URS filings, which are the subject of separate Consumer Trust measures.</p> <p>(1) Relative incidence of IP claims made in good faith should be measured in 3 areas:</p> <ul style="list-style-type: none"> IP claims against registrants regarding second level domains in new gTLDs; IP claims against registrars regarding Second level domains in new gTLDs; IP claims against new gTLD registries regarding second level domains and TLDs. <p>(2) Quantity of second level domains acquired because of infringement or other violations of IP rights of acquiring parties</p> <p>(3) Demonstrable Cost of domain name policing and enforcement efforts by IP owners.</p>	IP focused entities	<p>Independent report or survey conducted by IP-focused entity (e.g. INTA, AIPLA, etc.)</p> <p>Difficult to determine reliable and unbiased source.</p> <p>If surveyed or sampled, data must be statistically significant. Confidentiality and legal restrictions may require use of third party for data collection and anonymous/aggregate reporting.</p> <p>Proposal: Poll IP organizations regarding interest in participation and willingness to assist in funding this survey/study.</p>	Declining over time	External, IAG-CCT members exploring feasibility with International Trademark Association (INTA,) which has expressed an interesting in polling their members on this topic. Subject to some definition of terms, such as which costs would be included, whether these are internal or external (in-house vs. outside counsel.)
[1.12] Decisions against Registry Operator arising from Registry Restrictions Dispute Resolutions Procedure (RRDRP).	RRDRP Providers	None noted	No adverse decisions	Metric is feasible and useful.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
<p>[1.13] Quantity of Compliance Concerns regarding Applicable National Laws, including reported data security breaches at Registries and Registrars.</p>	<p>LEA/GAC</p>	<p>Difficult, because law enforcement and governments may not report this data</p>	<p>Declining incidence from Year 2 to 3</p>	<p>ICANN staff working with its liaisons in the law enforcement community determined there was no reliable way to gather data linking compliance concerns and “applicable” national laws. As such, the group decided to drop the first part of the metric. In addition, as data security breaches are required to be reported to ICANN, this part of the metric will be counted. The rephrased metric now reads: “Number of reported data security breaches.”</p>
<p>[1.14] Quantity and relative incidence of Domain Takedowns, including takedowns required by law enforcement .</p>	<p>Registry, LEA</p>	<p>Moderately difficult to obtain and report</p>	<p>Significantly Lower than incidence in legacy gTLDs</p>	<p>ICANN will reach out to registries to provide this information, which they are not required to provide. It will be important to gauge the incidences of takedowns in the context of the reasons for the takedowns. For examples, were domains taken down for nonpayment of services or due to law enforcement concerns? The relative incidence of various justifications may provide greater insight into the nature of abusive behavior in particular TLDs. It may also require additional information from governments or law enforcement authorities, who may only provide partial data on some of these requests.</p>

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[1.15] Quantity and relative incidence of spam from domains in new gTLDs, which could be measured via specialized email addresses and methodologies.	SpamHaus	None noted	Significantly Lower than incidence in legacy gTLDs	Data on abusive behavior in the DNS is widely available and collected by third parties. Though these data sets often come with a fee – and will require some technical expertise to interpret and analyze the numbers – the IAG-CCT members agreed that this is important data to collect and compare against a baseline of abusive behavior in the legacy TLDs. Given the fact that multiple streams of data define particularly botnets and malware in different ways, the group recommended exploring multiple sources of information to compare the data and help the review team reach a conclusion about how this behavior is changing over time. Spam and phishing statistics may be best provided by Spamhaus and the Anti-Phishing Working Group.
[1.16] Quantity and relative incidence of fraudulent transactions caused by phishing sites in new gTLDs.	APWG / LEA	None noted	Significantly Lower than incidence in legacy gTLDs	
[1.17] Quantity and relative incidence of detected phishing sites using new gTLDs.	APWG / LEA	None noted	Significantly Lower than incidence in legacy gTLDs	
[1.18] Quantity and relative incidence of detected botnets and malware distributed using new gTLDs.	APWG / LEA	Not clear on source of data. May require LEA contribution in addition to APWG	Significantly Lower than incidence in legacy gTLDs	
[1.19] Quantity and relative incidence of sites found to be dealing in or distributing identities and account information used in identity fraud.	LEA/Govt	Will require Govt/LEA contribution	Significantly Lower than incidence in legacy gTLDs	

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[1.20] Quantity and relative incidence of complaints filed to ICANN regarding inaccurate, invalid, or suspect WHOIS records in new gTLD.	ICANN	None noted	Significantly Lower than incidence in legacy gTLDs	Metric is feasible and useful.
[1.21] Relative incidence of errors in new gTLD zones (such as commas instead of dots, bad IP addresses, malformed domains, etc.).	ICANN	Moderately difficult to obtain and report	Significantly Lower than incidence in legacy gTLDs	While this is data that can be internally gathered, IAG-CCT members were asked to provide a further definition of “errors” in the case of gTLD zones. Some initial definitions included the following: Errors may be caused by commas instead of dots, bad IP addresses or malformed domains. ICANN is working with its technical services team to better define measures to capture this data. Upon consultation with ICANN’s technical services team, ICANN staff recommends using a test based on that which is used to measure lame delegations. In short, the test would query a given TLD for domain names registered and whether they are actually represented in the zone file. ICANN staff suggested that syntactic errors (such as commas instead of dots) are extremely difficult to measure due to DNS resiliency. The distinction is that the chosen test should measure the quality of the registration data and not the quality of registrants’ DNS operations.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[1.22] Qualitative comparison of mission and purpose set forth in the Question 18 of the new gTLD Application with current actual use of the gTLD.	ICANN	None noted	No target; comparison only	Qualitative study may be conducted externally or may require a third party's analysis.
<i>ALAC additional measures of Consumer Trust: End-User Confusion</i>				
[4.1] Frequency of success in reaching the intended information supplier through direct entry of domain names	Survey of end-users; SEO research	Note 1	Neutral or increase	Included in global consumer survey metrics. Question will be posed to a sample of Internet users.
[4.2] Frequency of landing at unintended destinations	Survey of end-users; SEO analytics	Note 1. Selective sample of analytics may determine the success of typo-squatting or other unintended destinations	Neutral or decrease	

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[4.3] Frequency of redundant or defensive domains (ie, multiple domains pointing to the same destination)	Survey of registrants	Note 2	Neutral or decrease	<p>Responses will likely be dependent on awareness of new gTLDs and perhaps on the financial resources of registrants. For registrants who are aware of new gTLDs, the survey instrument should be constructed to measure:</p> <ol style="list-style-type: none"> 1. Prevalence of registrants holding multiple domains 2. Motivation for registering (e.g., defensive) and not registering (e.g., lack of resources) multiple domains, regardless of knowledge of new gTLDs. <p>For registrants who are aware of expansion, measure attitudes towards expansion and satisfaction with expansion of gTLDs. For example, the instrument might inquire about what the expansion means to the respondent (what are the implications, such as providing increased choice or necessitating defensive measures), and inquiries about the potential benefits in comparison to the potential costs.</p>

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[4.4] Frequency of dead-end domains (registered but do not resolve)	Registry data + automated sampling	Note 3	Proportion relative to total domains should decrease	ICANN staff recommends further refining the definition of “dead-end domains.” Domains that are registered but do not resolve may be attributed to IDN variants, where a set of variants may be registered but only one may resolve. Measuring parked domains may also result in faulty data as some domains may be registered for email or other such purposes. Similarly, websites that redirect may also result in false reports of “dead-end domains.” Finally, a dead-end domain could be one registered and delegated but the authoritative servers for the name are inoperable, unreachable or otherwise misfiring. This might be a measure of how little a registrant values a name registration in the TLD or just bad management by the registrant.

<p>[4.5] Numbers of complaints received by ICANN regarding improper use of domains</p>	<p>ICANN</p>	<p>Supplements GNSO metric 1.9 by assessing volume of end-user complaints (which may not come from name owners or result in URS/UDRP action)</p>	<p>With metric 8.1, These metrics both required further definition to be able to parse data available from ICANN’s contractual compliance department. Because the compliance department tracks complaints based on certain types of complaints, ICANN staff worked with the IAG-CCT members to identify complaint types that were most applicable to these metrics. Complaints related to improper use of domains:</p> <ul style="list-style-type: none"> • Reports of alleged illegal activity: These complaints are referred to government or law enforcement agencies. • Legitimate domain use: Registrants are not required to use their websites in any particular way. • Website content: As ICANN does not have the authority to police website content, these complaints are closed. • Hijacking (email or control panel): Hijacking of email addresses or access credentials should be reported to law enforcement. • Denied OK – Evidence of fraud: The registrar was justified in refusing to transfer a domain
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Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
				<p>name because of evidence of fraud.</p> <ul style="list-style-type: none"> Spam: ICANN does not have authority to address complaints about spam.
<i>ALAC additional measures of Consumer Trust: Growth in use of both domain-based and non-domain-based alternatives for Internet resource access</i>				
[5.1] Relative preference of explicit use of domain names versus search engines for end-user general Internet use	Survey of end users; SEO analytics	Note 1	Note 4	To be included in the global consumer survey questions. The survey should also consider including as part of this topic, other tools that do not reveal TLDs such as those mentioned in Metric 2.12.
[5.2] Growth in use of hosted pages for organizations (such as Facebook or Google+)	Market Research	e.g., Comscore	Note 4	There was disagreement among IAG-CCT members on the utility of these metrics as gauges of trust in the DNS. Some members argued that growth in the use of alternative tools to access content on the Internet is more a reflection of
[5.3] Growth in use of QR codes	Market Research	e.g., ScanLife	Note 4	

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[5.4] Growth in use of URL shortening services	Market Research		Note 4	<p>changes in how people interact with the DNS than a measure of trust. As such, some members argued that it may be a better indicator of choice, though not choice in the DNS.</p> <p>Other IAG-CCT members suggested the metrics are reliable indicators of trust because growth in the use of these services may indicate diminished trust in and use of what may arguably be more memorable domain names in the new gTLDs.</p> <p>Because the data is available, for a fee, using market research and other web analytic firms, the group decided to recommend collection of this data to the review team. ICANN staff recommend considering the findings in context, perhaps in consideration with DNS traffic in new gTLDs to be measured in metric 2.14.</p>
[5.5] Growth in registrations in ccTLDs relative to gTLDs	Registry data	Note 3	significant increase in use of ccTLDs could mean reduced trust in generic TLDs	Will require data from ccTLDs, which may not provide a representative sample. In addition, ccTLD data may have use restrictions.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[5.6] Growth of Software Defined Networking (SDN) as alternative to the DNS	Market Research		Note 4	For the purposes of this analysis, SDN was defined as those tools that hide a URL when navigating the Internet, such as QR codes. Given that the group recommended the collection of data related to tools that present an alternative to memorable domain names in metrics 5.2-5.4, the IAG-CCT members chose to recommend this metric for exclusion from the analysis. IAG-CCT members also noted another definition for SDN as a different approach to computer networking.
<i>ALAC additional measures of Consumer Trust: Complaints to, and action taken by, police, regulatory agencies and advocacy groups</i>				
[6.1] Number of consumer complaints to government agencies related to confusing or misleading domain names	Govt regulatory agencies	Establishing relationships with consumer protection and regulatory agencies may be difficult to initiate; however ICANN is expected to have such relationships in place anyway, either directly or through GAC representatives	Proportion relative to total domains should decrease	The IAG-CCT members agreed that this would be difficult data to capture from government agencies that may track data in disparate ways and so recommended excluding it from the metrics. In addition, the group expressed concern that the “confusing or misleading domain names” may be difficult to define in a consistent way across different legal environments and cultures.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[6.2] Number of complaints to police agencies alleging fraud or misrepresentation based on – or traced to – domain names	LEA	ICANN already has existing communications with LEA groups. Supplements GNSO metrics 1.15 and 1.16 by adding complaints as well as remedial action		The review team may want to consider rephrasing this metric to be more broadly inclusive of cyber crime or cyber fraud, as opposed to connecting those crimes to domain names, which may be difficult to track. There is global data available on cyber crime, such as Kroll’s Global Fraud Report and econsumer.gov, an initiative of the International Consumer Protection and Enforcement Network.
[6.3] Number of fraud investigations where WHOIS information positively assisted investigation and identification of offending parties	LEA			The group recommended this metric be excluded from the evaluation as feedback indicated law enforcement would be unwilling to reveal their investigation techniques in a public way, nor were they likely to keep track of this data on a larger scale. Further, some members suggested that there was little connection between this metric and the success of the New gTLD Program.
<i>ALAC additional measures of Consumer Trust: Transparency of contact information and domain-allocation policies for all gTLDs</i>				
[7.1] How many gTLD registries have privacy policies which are clearly and easily accessible by end users	Registry websites	Manual audit	As many as possible	Metric is feasible and useful.

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[7.2] How many gTLD registries have allocation policies which are clearly and easily accessible by end users, even if those policies simply restrict or prohibit public availability	Registry websites	Manual audit	As many as possible	Metric is feasible and useful.
[7.3] How many registries disclose end-user information regarding their codes of conduct for sub-domain owner/operators	Registry websites	Manual audit	As many as possible	Metric is feasible and useful.
<i>ALAC additional measures of Consumer Trust: Accuracy of new gTLD promotion to end users</i>				

<p>[8.1] How many complaints are received by ICANN related to confusion or misunderstanding of TLD functions</p>	<p>ICANN</p>		<p>With metric 4.5, these metrics both required further definition to be able to parse data available from ICANN’s contractual compliance department. Because the compliance department tracks complaints based on certain types of complaints, ICANN staff worked with the IAG-CCT members to identify complaint types that were most applicable to these metrics. Complaints related to confusion or misunderstanding of a TLD function:</p> <ul style="list-style-type: none"> • Non-IDN: The complaint is not for an IDN domain name. • Registrar does not offer IDNs: Complaint about an IDN registered with a registrar that does not offer IDNs. • Deletion OK: Registrar demonstration that deletion of a domain name was compliant with the 2013 RAA. • Not a new gTLD: Complaint notice about trademark notices in a domain that is not a new gTLD, which require trademark notices. • Outside claims period: Trademark notice complaint that is outside the claim notice period. • Non-2013 RAA: Complaint is related to a 2013 RAA but the
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				<p>registrar is using a 2001 or 2009 version of the RAA.</p> <ul style="list-style-type: none"> • ccTLD: The complaint is related to a domain registered in a ccTLD. ICANN does not accredit ccTLD registrars. • Customer service not in RAA: ICANN does not have contractual authority to address customer service issues that fall outside the RAA. • Private dispute: The complaint indicates a private dispute between the complainant and a third party, over which ICANN does not have contractual authority. • Spam: ICANN does not have authority to police spam. • Website content: ICANN does not regulate website content. • Complaint about wrong website: Complaint referred to a site that is not registered with the referenced registrar. • Complaint about wrong entity: Complaint referenced a non-ICANN-accredited registrar or a wrong entity. • Complaint outside data retention obligations: Complaint references data that registrars
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				<p>aren't obligated to maintain or those that can no longer be maintained due to age.</p> <ul style="list-style-type: none"> • Irrelevant: A Whois-related complaint for an irrelevant/invalid complaint. • Complainant owns domain name: Complainant owns the domain name about which they are complaining. • Complaint outside scope: Complaint falls outside provisions of registry agreement. • ICANN not a registrar: ICANN doesn't register domain names. • Not applicable to this TLD (Invalid): The complaint is not applicable to the generic, top-level domain (gTLD) of the complaint. • Reseller/web hosting: Complaint falls outside the scope of the RAA and is with an entity that does not have a contractual relationship with ICANN. • Blocked SLD confirmed (Invalid): The registry operator may reserve or block additional character strings at its own discretion; or the second level domain (SLD) name of the
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Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
				complaint is in the list of SLD names required to be blocked per the Alternate Path to Delegation Report of the gTLD of the complaint.
[8.2] How many registries are subject to Compliance activity based on reported breaches of RAA	ICANN			The group members agreed that metric 1.6, Relative incidence of breach notices issued to Registry operators for contract or policy compliance matters, covers this topic given that registries are not subject to compliance activity based on reported breaches of an RAA. Further, metric 1.7 also captures compliance activity related to registrar breach notices: Relative incidence of breach notices issued to Registrars, for contract or policy compliance matters. Consequently, this metric was recommended for exclusion.
[8.3] How many registries have been the subject of complaints related to their Public Interest Commitments (PICs)	ICANN			Metric is feasible and useful.
[8.4] How many registries have lost a dispute resolution process related to their PICs	ICANN			Metric is feasible and useful.
<i>ALAC additional measures of Consumer Trust: Technical issues encountered (including application support)</i>				

Measure of Consumer Trust	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[9.1] Are end-user software applications capable of implementing all of the new gTLDs; Can browsers and DNS clients in end-user systems resolve all new gTLDs	Audit		All major browsers and OS should have versions capable of resolving all new gTLDs, including IDNs	With metric 9.2 will be explored in a study on universal acceptance.
[9.2] Which browsers or other end-user applications require plugins or user-installed enhancements in order to use new gTLDs	Audit		Support should be native rather than as an add-in	
[9.3] Number of reports of name collisions				Recommended for addition. ICANN will be tracking this data.

Note: Some public comments recognized that ICANN is a party to the Registry Operator agreement and the Registrar Accreditation agreement. Consumer Trust will be based not only on industry participants and their activities within the market, but also on the behavior and operation of ICANN. Industry participants and consumers all need to be able to rely on the stable, secure and predictable governance of the critical internet functions that ICANN is responsible for overseeing. Thus ICANN's performance in managing contract compliance will have an impact on Consumer Trust. Some ICANN compliance performance metrics may be worthy of inclusion in the overall metrics framework.

Notes (ALAC)

- 1) As the scope of ALAC and ICANN itself is global, we anticipate and expect that any metrics to be measured by survey (both the ALAC and GNSO metrics) would need to be globally distributed and multi-lingual
- 2) External sources (such as business intelligence publications) can supplement (and reduce the cost of) customized surveys.
- 3) An automated system could sample random second-level domains to perform tests based on lists of domain names supplied by registries. The withholding of source data for metrics by contracted parties, in order to prevent collection of metrics which may be perceived to reflect upon them negatively, could impact the metrics and prevent ICANN from accurately measuring end-user trust

- 4) Significant growth in alternative methods of accessing Internet services may indicate a corresponding reduction in the relative trust of domain names to perform the same function. When possible, statistics should provide comparison with similar statistics for legacy TLDs.

Measures of Consumer Choice

For reference, the definitions of Consumer and Consumer Choice are repeated here:

Consumer is defined as actual and potential Internet users and registrants.

Consumer Choice is defined as the range of options available to Consumers for domain scripts and languages, and for TLDs that offer meaningful choices as to the proposed purpose and integrity of their domain name registrants.

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
<i>Transparency and understanding of gTLD registry benefits and restrictions, so that registrants and users can make meaningful distinctions when choosing TLDs.</i>				
[2.1] Measure potential registrants' understanding of TLD benefits and restrictions, such that potential registrants can make informed choices about registration of their domain names. This measure includes only open gTLDs.	Surveys; Audit of Registry websites	Biennial survey (see 2.3) could assess registrants' understanding. Moderate difficulty in auditing TLD general information page(s) for plain language disclosure.	All open gTLD Registries should disclose (e.g. ICM's disclosure ⁶ for .xxx)	To be included in the global consumer survey. Survey should not serve as a venue to explain policies or to explain the nature of gTLD benefits or restrictions. It is reasonable to assume that registrants' and end-users' understanding and knowledge of gTLD benefits and restrictions will be conditional on their awareness of new gTLDs. Therefore, ICANN anticipates survey questions regarding this metric will likely include skip patterns to target survey respondents who are aware of the issues, while allowing survey
[2.2 Measure Internet users' understanding of TLD eligibility restrictions, such that Internet users can make informed choices about reliance on domain names in that TLD.	Surveys; Audit of Registry websites	Biennial survey (see 2.3) could assess users' understanding. Moderate difficulty in auditing TLD general information page(s) for plain language disclosure.	No target specified	

⁶ ICM's Disclosure: <http://www.icmregistry.com/about/sponsored-community/>

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
				respondents who are unaware to move to the next section of the survey.
[2.3] Biennial surveys of perceived consumer choice in DNS, relative to experience before the gTLD expansion. (Survey in conjunction with Consumer Trust survey noted in above section). Survey should assess public awareness of new gTLDs. Survey should also measure costs of defensive or duplicate registrations. Survey should assess motivations, intent, and satisfaction with new gTLDs.	Survey Vendor	Moderate difficulty to gain consensus on survey questions. Survey cost is approx. \$100K.	Should show improvement on all survey measures	To be included in global consumer survey.
<i>Range of options available to registrants and users in terms of scripts and applicable national laws</i>				
[2.4] Quantity of TLDs using IDN scripts or languages other than English at the top level.	Registry websites	None noted	Increase in the number of TLDs in IDN scripts or languages other than English, relative to 2011	Metric is feasible and useful.
[2.5] Quantity of Registrars offering IDN scripts or languages other than English.	Registrar websites	None noted	Increase in the number of Registrars in IDN scripts or languages other than English, relative to 2011	Metric is feasible and useful.
[2.6] The percentage of IDNs as compared to the total number of gTLDs in each script or	Registry websites	Must identify reliable source of number of speakers or	The percentage of IDNs should	IAG-CCT members decided that the numerator in this instance is the data in

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
language should be compared to the percentage of people who use each particular language or script.	and statistical determination of number of speakers or script users	users of each language or script	trend closer to the percentage of the population that uses that script over time	metrics 2.4 and 2.5 regarding IDN registrations and available registries. The group recommends the review team collect this data by comparing the numbers available to UNESCO or other data on languages spoken in the world if the review team so chooses. The group recommends the metric to be rephrased to read: "The number of registrations in IDN TLDs as compared to the total number of registrations in new gTLDs. Measure growth over time."
[2.7] Quantity of different national legal regimes where new gTLD Registry Operators are based.	Registry websites	Not difficult, if each nation is counted as a separate legal regime	Number of choices in new gTLDs > number in legacy gTLDs	Metric is feasible and useful.
<i>Measures designed to assess whether prior registrants chose new gTLDs for primarily defensive purposes. . Each measure is a potential indicator of defensive registration, and not a precise indicator. These measures must be considered jointly, not separately. Targets accommodate likely over-counting of defensive registrations.</i>				
Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[2.8] A defensive registration is not seen as an improvement in choices available to registrants. For purposes of this measure, “defensive registrations” are Sunrise registrations & domain blocks. Measure share of (Sunrise registrations & domain blocks) to total registrations in each new gTLD. Open gTLDs only.	Zone snapshot at end of Sunrise	Obtainable, since Registries must publish zone before open registration begins.	Post-Sunrise registrations > 85% of total registrations. Post-sunrise registrations should increase over time	IAG-CCT members agreed that this is an important metric to capture the nature of domain name transactions during the sunrise and launch periods. To provide a baseline for comparison, ICANN may need to require some legacy registries to provide sunrise and domain block information. For new gTLDs, registries will provide ICANN with sunrise data, but

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
				registries are not required to report domain blocks. Depending on the response ICANN receives from registry operators, the available data may be limited and thus difficult to analyze. It will be important to distinguish between domain blocks and IDN variants to ensure that the right set of data is being captured.
[2.9] Relative share of new gTLD registrations already having the same domain in legacy TLDs. prior to expansion For this measure, count all registrations that redirect to domains in legacy TLDs. Open gTLDs only.	Zone data	Requires snapshot of all legacy gTLD zones before delegation of new gTLDs	“Redirected” registrations < 15% of all new registrations; % should decline over time	The distinction between these two metrics is that 2.10 is meant to survey registrants who are maintaining identical sites in different TLDs, while 2.9 only looks at those domain names which redirect from new gTLDs to legacy TLDs. The group noted that 2.10 may be a challenge if the consumer survey does not sample a statistically significant sample of registrants. Further, ICANN’s technical services team notes that this would be extremely difficult to measure using queries or other methodologies given the size of the data sets that must be compared. The IAG-CCT members agreed to recommend the review team put 2.10 on hold until it can confirm that 2.9 resulted in a statistically significant sample of relevant registrants.
[2.10] Automated analysis or online survey to determine the number of “duplicate” registrations in new gTLDs. For purposes of this measure, “duplicate” registrations are those where registrant reports having (and still maintaining) the same domain name in a legacy gTLD. Open gTLDs only.	Online Survey	Obtainable, using either ICANN or external survey tools and advice	“Duplicate” registrations < 15% of all new registrations; This % should decline over time	
<i>Other measures of Consumer Choice in new gTLDs</i>				

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[2.11] Measure the increased geographic diversity of registrants across new open gTLDs, as indication of new choices created by gTLD expansion. (Do not count privacy/proxy registrations or registrations that fail to resolve).	Zone and WHOIS data	The working group sought but not find an index or statistical measure of geographical diversity	Diversity should be greater than in legacy gTLDs; Diversity should increase from previous year	Internal, technical services team, Whois records, zone files. Note that Whois records may not be a reliable record of geographic locations of registrants.
[2.12] Survey or Study to gauge the frequency with which users access internet resources via tools that do not reveal the TLD. (e.g. QR Codes, search results, apps, etc. that do not display URLs).	Online survey or empirical study	User survey may be too subjective to provide data. Refer to Consumer Choice survey of users noted above (page 13)	No Target	To be included in the global consumer survey. If this metric is also used to inform trust in the DNS, will need to disentangle the issue of familiarity from why users choose these tools. To operationalize these metric, contractors will work with ICANN to devise a list of relevant examples of tools that do not reveal gTLDs, and to describe the examples in plain language.
[2.13] Biennial survey of perceived consumer choice relative to experiences before the gTLD expansion (to be performed in conjunction with Consumer Trust survey suggested on page 8. Survey should assess public awareness of new gTLDs. Survey should also measure costs of defensive or duplicate registrations. Survey should assess motivations, intent, and satisfaction with new gTLDs.	Online survey or empirical study	User survey may be too subjective to provide data. Refer to Consumer Choice survey of users noted above (page 13)	Should show improvement on all survey measures	IAG-CCT members decided this metric was duplicative of metric 2.3: Biennial surveys of perceived consumer choice in DNS, relative to experience before the gTLD expansion and decided to exclude it from the recommendation.
[2.14] DNS traffic is an indicator of trust, choice, and competition. DNS traffic in new gTLDs should be compared to contemporary user traffic in legacy gTLDs. If	DNS Scrubbers	Data sources need to be researched and confirmed	Compare to show growth in new gTLD traffic relative to	Measuring traffic in new gTLDs may require the purchase of third party data. Sampling traffic in particular TLDs may not offer an accurate picture of traffic in

Measure of Consumer Choice	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
comprehensive traffic data is not available, sampling should be used.	(e.g. Alexa)		growth in legacy gTLDs	the DNS. Registry operators report on queries that the TLD receives. This may be one source for capturing the data. Multiple vendors offer access to more complete data sources on DNS traffic, though the price tag may vary. ICANN staff recommends the review team revisit this topic to determine the best source of data.

Measures of Competition

For reference, the definition of Competition is repeated here:

Competition is defined as the quantity, diversity, and the potential for and actual market rivalry of TLDs, TLD registry operators, and registrars.

Measure of Competition	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
[3.1] Quantity of total TLDs before ¹ and after expansion, assuming that gTLDs and ccTLDs generally compete for the same registrants.	ICANN	None noted	Increase of 2x over 2011 (311 ¹)	Metric is feasible and useful.
[3.2] Quantity of gTLDs ² before and after expansion.	ICANN	None noted	Increase of 10x over 2011 (18 ²)	Metric is feasible and useful.
[3.3] Quantity of unique gTLD <i>Registry Operators</i> ³ before and after expansion.	ICANN	None noted	Increase of 2x over 2011 (14 ³)	Metric is feasible and useful.
[3.4] Quantity of unique gTLD <i>Registry Service Providers</i> ⁴ before and after expansion. This measure should count only open gTLDs.	ICANN and Ry Operators	None noted	Increase of 2x over 2011 (6 ⁴)	Metric is feasible and useful.
[3.5] Quantity of Registrars ⁵ before and after expansion, along with indication of country where Registrar is based. This measure should count only registrars distributing Open gTLDs.	ICANN	None noted	No target; compare to 2011 (1000 ⁵)	Metric is feasible and useful.
[3.6] Relative share of new gTLD registrations held by “new entrants”. For purposes of this measure, “new entrants” are gTLDs run by <i>Registry Operators</i> that	ICANN; Zone files	Moderately difficult to obtain.	No target, but new entrants should operate a significant	Metric is feasible and useful.

Measure of Competition	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
did not operate a legacy gTLD. A "new entrant" is one whose ownership is not among owners of legacy gTLD registries.	for new gTLDs		percentage of new gTLDs	
[3.7] To assess competitive impact of new gTLDs, measure the quantity of second level registrations per gTLD and ccTLD on a weekly or other interval. TLD attributes should be noted with the data (i.e. open TLDs, closed keyword TLDs, registration, country of operations, single registrant, etc.).	Zonefiles &/or 3 rd Party	None noted	No Target	While ICANN has access to zone files for gTLDs, there may be use restrictions for ccTLD zone files. With limitations on data available from ccTLDs IAG-CCT members acknowledged these metrics may prove challenging to gain a comprehensive picture of unique domain name registrations in the new gTLD space. Counting active domain name registrations may result in a clearer picture of rate of growth.
[3.8] Quantity of "unique" second level registrations in the new gTLD space where that same string does not appear as a registration in any other TLD on a weekly or other interval basis (data analyzed in conjunction with website traffic identified in Choice). Open gTLDs only.	Zonefiles &/or 3 rd Party	None noted	No Target	
Measures related to prices for domain registrations (see legal note in Appendix C)				
[3.9] <i>Wholesale</i> price of domains in new gTLD domains offered to the general public. TLD attributes should be noted with the data (i.e. open TLDs, closed keyword TLDs, country of operations, single registrant, etc.).	Ry & Rr data gathered by 3 rd Party Vendor	Difficult to obtain. (see legal note in Appendix C)	No target; compare to 2011 and to unrestricted legacy gTLDs	Metrics 3.9-3.11 were determined to require a third party's economic analysis of wholesale and retail pricing in the new gTLD space, as well as other indicators of non-price-related competition indicators. Because pricing in the legacy gTLD space may shift with the introduction of new gTLD domain names, IAG-CCT members felt it was important to launch this study
[3.10] <i>Retail</i> price of domains in new gTLD domains offered to the general public. TLD attributes should be noted with the data	Ry & Rr data gathered	Difficult to automate collection.	No target; compare to 2011 and to	

Measure of Competition	Source	Anticipated Difficulties in Obtaining and/or Reporting	3-year Target	IAG-CCT Recommendations
(i.e. open TLDs, closed keyword TLDs, country of operations, single registrant, etc.).	by 3rd Party Vendor	(see legal note in Appendix C)	unrestricted legacy gTLDs	as soon as possible to ensure a sufficient baseline of data was available for comparison when new gTLD domain names become more prevalent online. The study will place high importance on confidentiality of pricing data, particularly as it relates to specific registries, to guard against the appearance of collusion, and to protect registries' and registrars' competitive positions. An RFP for a study vendor was released 8 September. The target date to launch the study is early November 2014.
[3.11] Qualitative assessment of non-price indicia of competition through innovations that benefit registrants and users, particularly for new markets served.	Study	Studies for ICANN typically cost \$100 - \$200K.	No Target	

Appendix A

Working Group members:

Jonathan Zuck – IPC / WG Chair (Replacement)
Rosemary Sinclair - NCSG / *WG Chair (former)*
John Berard - CBUC / *GNSO Liaison for WG*
Olivier Crepin-Leblond – ALAC
Steve DelBianco – CBUC
Carlos Dionisio Aguirre - NCA
Alex Gakuru – NCSG
Michael Graham - IPC
Cheryl Langdon-Orr - ALAC
Evan Leibovitch – ALAC
Tobias Mahler – Individual
Jonathan Robinson - RySG
Tim Ruiz - RrSG
Wendy Seltzer – NCSG
Mason Cole – RrSG
Jeff Neuman – RySG

ICANN Staff:

Berry Cobb
Gisella Gruber
Julie Hedlund
Margie Milam

Nathalie Peregrine
Paul Redmond
Maguy Serad

[Link to Working Group Attendance Record](#)⁷

⁷ WG Attendance Record: <http://community.icann.org/display/CMG/WG+Attendance+Log>

Appendix B

SPECIFICATION 9: Registry Operator Code of Conduct

- 1) In connection with the operation of the registry for the TLD, Registry Operator will not, and will not allow any parent, subsidiary, Affiliate, subcontractor or other related entity, to the extent such party is engaged in the provision of Registry Services with respect to the TLD (each, a "Registry Related Party"), to:
 - a. directly or indirectly show any preference or provide any special consideration to any registrar with respect to operational access to registry systems and related registry services, unless comparable opportunities to qualify for such preferences or considerations are made available to all registrars on substantially similar terms and subject to substantially similar conditions;
 - b. register domain names in its own right, except for names registered through an ICANN accredited registrar that are reasonably necessary for the management, operations and purpose of the TLD, provided, that Registry Operator may reserve names from registration pursuant to Section 2.6 of the Registry Agreement;
 - c. register names in the TLD or sub-domains of the TLD based upon proprietary access to information about searches or resolution requests by consumers for domain names not yet registered (commonly known as, "front-running");
 - d. allow any Affiliated registrar to disclose user data to Registry Operator or any Registry Related Party, except as necessary for the management and operations of the TLD, unless all unrelated third parties (including other registry operators) are given equivalent access to such user data on substantially similar terms and subject to substantially similar conditions; or
 - e. disclose confidential registry data or confidential information about its Registry Services or operations to any employee of any DNS services provider, except as necessary for the management and operations of the TLD, unless all unrelated third parties (including other registry operators) are given equivalent access to such confidential registry data or confidential information on substantially similar terms and subject to substantially similar conditions.
- 2) If Registry Operator or a Registry Related Party also operates as a provider of registrar or registrar-reseller services, Registry Operator will, or will cause such Registry Related Party to, ensure that such services are offered through a legal entity separate from Registry Operator, and maintain separate books of accounts with respect to its registrar or registrar-reseller operations.
- 3) Registry Operator will conduct internal reviews at least once per calendar year to ensure compliance with this Code of Conduct. Within twenty (20) calendar days following the end of each calendar year, Registry Operator will provide the results of the internal review, along with a certification executed by an executive officer of Registry Operator certifying as to Registry Operator's compliance with this Code of Conduct, via email to an address to be provided by ICANN. (ICANN may specify in the future the form and contents of such reports or that the reports be delivered by other reasonable means.) Registry Operator agrees that ICANN may publicly post such results and certification.
- 4) Nothing set forth herein shall: (i) limit ICANN from conducting investigations of claims of Registry Operator's non-compliance with this Code of Conduct; or (ii) provide grounds for Registry Operator to refuse to cooperate with ICANN investigations of claims of Registry Operator's non-compliance with this Code of Conduct.
- 5) Nothing set forth herein shall limit the ability of Registry Operator or any Registry Related Party to

Appendix C

Note from ICANN Legal Department, regarding collection of non-public data on domain prices.

As part of devising measures for Competition, the Working Group sought advice from ICANN's Legal Department on the collection and publishing data on domain name prices, at both wholesale and retail level. The response from ICANN legal is shown below.

Thank you for the constructive work underway to meet the Board's request for community assistance on this consumer metrics issue. The team has clearly considered many aspects of consumer choice and the breadth of proposed metrics appears to be well thought out. While we do not wish to constrain the work proposed, the office of the General Counsel has expressed concerns regarding the collection of price-related information as part of the consumer metrics. Collection and comparison of non-public price-related information raises antitrust concerns in this context, particularly where market participants may have access to the collected information. This is not meant to restrict the Working Team from reviewing how competition may have been created through the introduction of new gTLDs, but rather to avoid the expansion of a community discussion into areas that may raise questions of anti-competitive conduct, or lead to outcomes that could impose anti-competitive restrictions.

ICANN is not currently in the position of collecting non-public price information from its registries and registrars. Requiring submission of non-public pricing information from its contracted parties would represent a change to ICANN's relationships with its contracted parties, and imposes risks to ICANN as the holder of this compiled confidential information. In addition, it is not only ICANN that comprises the review teams required under the Affirmation of Commitments. There is the possibility that those with existing or future interests in the TLD industry are members of the team. Providing persons on a review team with non-public pricing information across an entire industry (information that is not ICANN's to begin with) provides the possibility for anti-competitive conduct, even if there are restrictions in place for the use of the information, creates a significant risk to ICANN as a whole.

One of the concerns regarding the consideration of price-related information - whether it is publicly available or not - is the possibility that an outcome of a future review results in a price-related recommendation. To that extent, any consideration of price-related recommendations is not recommended, as it would raise both legal and accountability issues. ICANN does not wish to encourage the creation of recommendations that are legally not feasible to implement. That outcome is not desirable for your team, for the review team, or for ICANN. We look forward to working with you to continue to provide guidance on this issue as you complete your work.

Note: While this legal concern is appreciated, the Working Group notes that none of the measures suggested in this draft advice document would require ICANN to issue any recommendations for how registrars and registries price their domain names.

Nor does this advice presume that ICANN itself would be responsible to collect or publish any data that is confidential due to its contract party role. Third-parties could be hired to collect data under confidentiality provisions, and to report results in the aggregate and/or use anonymous labels.

Appendix D

The following is a dissent position from Wendy Seltzer and Alex Gakuru of the Non-Commercial Stakeholder Group:

NCSG believes that many of the "Consumer Trust" metrics rely on a faulty premise, that gTLDs should be predictable, rather than open to innovative and unexpected new uses.

These metrics mistake a platform, a gTLD, for an end-product. A key value of a platform is its generativity -- its ability to be used and leveraged by third parties for new, unexpected purposes. Precisely because much innovation is unanticipated, it cannot be predicted for a chart of measures. Moreover, incentives on the intermediaries to control their platforms translate into restrictions on end-users' free expression and innovation.

Just as we would not want to speak about "trust" in a pad of printing paper, on which anyone could make posters, and we don't ask a road system to interrogate what its drivers plan to do when they reach their destinations, we should not judge DNS registries on their users' activities.

ICANN's planned reviews of and targets for gTLD success should not interfere with market decisions about the utility of various offerings.

In particular, NCSG disagrees with attribution at the gTLD level of the second group of "trust" metrics, the "Measures related to confidence that TLD operators are fulfilling promises and complying with ICANN policies and applicable national laws:" namely, 1.9, 1.10, 1.11, 1.13, 1.14, 1.15, 1.16, 1.17, 1.18, 1.19, 1.20. It is further inappropriate to use unverified complaints as a basis for metrics (1.9, 1.11, 1.20).

Separately, NCSG disagrees with setting targets for the "redirection," "duplicates," (2.10, 2.11) and "traffic" (2.15) measures. All of these presume that the use for new gTLDs is to provide the same type of service to different parties, while some might be used to provide different services to parties including existing registrants.

The following is an email response to dissent position from Evan Leibovitch of ALAC:

*On 12 August 2012 14:44, Wendy Seltzer <wendy@seltzer.com> wrote:
In particular, NCSG disagrees with attribution at the gTLD level of the second group of "trust" metrics, the "Measures related to confidence that TLD operators are fulfilling promises and complying with ICANN policies and applicable national laws:" namely, 1.9, 1.10, 1.11, 1.13, 1.14, 1.15, 1.16, 1.17,1.18, 1.19, 1.20. It is further inappropriate to use unverified complaints as a basis for metrics (1.9, 1.11, 1.20).*

For what it's worth

As many in this group know, I've been one of its more-cynical participants, and from the start was very concerned about the apparent lack of concern for non-registrant end-users. In the time since, I've come to appreciate the work that the group (and especially Olivier and Cheryl) have done to address my concerns, notably changes in the preamble and especially for user-focused metrics additions such as 2.13.

In the same light I wish to assert that, from a public-interest (and more to the point "public trust in the DNS") point of view, measures such as 1.10 1.13, 1.16, 1.17, 1.18, 1.19 are vital in helping to build public confidence that growth in the name system is not accompanied by growth in opportunities to attack and defraud Internet end users.

(Having said that, I agree completely with Wendy that metrics regarding unverified or unsubstantiated complaints should be assigned significantly less value than those that are proven, or preferably should be dropped entirely. Innocent until proven guilty, etc. A growth in complaints could simply indicate a growth in harassment of legitimate sites -- the "complaint" metrics would be useful if seen in this light, as a metric of harassment of registrants.)

Separately, NCSG disagrees with setting targets for the "redirection," "duplicates," (2.10, 2.11) and "traffic" (2.15) measures. All of these presume that the use for new gTLDs is to provide the same type of service to different parties, while some might be used to provide different services to parties including existing registrants.

I would humbly disagree with Wendy on 2.10 and 2.11. While they may not suit every kind of analysis, they most certainly address a widespread (of which I'm aware at a grassroots level) complaint that the gTLD expansion is a "shakedown" attempt to coerce existing domain owners to buy

new domains they don't need (but must "stake out"). These metrics could be used to indicate trends in the perception of need for defensive domain purchases.

As for 2.15, I think I agree with Wendy. I don't see traffic volume on its own as a measure of much to do with trust or confidence.

- Evan

Endnotes

¹ IANA.org db (<http://www.iana.org/domains/root/db>). There were 311 TLDs before expansion, assuming that gTLDs and ccTLDs generally compete for the same registrants. Of 326 TLDs delegated at the root, we counted 311 as of Jan-2012:

293 Country Code TLDs (38 were IDN)

18 Generic TLDs (4 generic, 3 generic-restricted, 11 sponsored); omitting .gov, .mil, .int

² gTLDs before expansion, including 4 generic, 3 generic-restricted, 11 sponsored (omit .gov, .mil, .int, .edu, .arpa) - **17**:

AERO	ASIA
BIZ	CAT
COM	COOP
	INFO
JOBS	MOBI
MUSEUM	NAME
NET	ORG
PRO	TEL
TRAVEL	XXX

³ Quantity of unique Generic Registry Operators before expansion – **14**:

VeriSign Global Registry Services

Telnic Ltd.

NeuStar, Inc.

DotAsia Organisation Ltd.

DotCooperation LLC

Afilias Limited***

mTLD Top Level Domain Limited dba dotMobi***

Museum Domain Management Association

Employ Media LLC

Public Interest Registry (PIR)

Fundacio puntCAT

Societe Internationale de Telecommunications Aeronautique (SITA INC USA)

Tralliance Registry Management Company, LLC.

ICM Registry LLC

***The total count of Registry Operators should be listed at 14, because dotMobi & RegistryPro are wholly owned by Afilias. However, the WG did not have time to determine the affiliate count for Registrars and to maintain consistency for this draft, dotMobi and RegistryPro will count as unique

⁴ Quantity of Generic Registry Service Providers before expansion – **6**:

VeriSign Global Registry Services

Afilias Limited

NeuStar, Inc.

CORE Internet Council of Registrars

Public Interest Registry (PIR)

Midcounties Co-operative Domains Ltd

⁵ ICANN Accredited Registrars List (<http://www.icann.org/en/registrars/accredited-list.html>)

1000 Registrars before Jan-2012 ****

**** This number reflects all accredited Registrars and does not represent affiliated entities