

**CANADIAN NUMBERING ADMINISTRATION CONSORTIUM INC.
CONSORTIUM DE GESTION DE LA NUMÉROTATION CANADIENNE INC.
(CNAC)**

Request For Proposals

**Perform the Functions of
Canadian Numbering Administration (CNA)
For the Period
1 January 2019 to 31 December 2023**

Proposal Due Date: 23 March 2018
(See full RFP schedule on page 26)

5 January 2018

TABLE OF CONTENTS

CONFIDENTIALITY.....	4
1.0 PURPOSE OF RFP.....	5
2.0 ADMINISTRATIVE INQUIRIES REGARDING THIS RFP.....	6
3.0 BACKGROUND	6
4.0 REQUIREMENTS.....	9
4.1 Eligibility to Submit Proposals	9
4.2 Subcontractors.....	9
4.3 Neutrality	10
4.4 Requirements Specification	10
4.4.1 <i>CSCN Secretary</i>	11
4.4.2 <i>The CNA Role in NANPA-Administered Resources</i>	12
4.4.3 <i>Central Office Code Administration Including NPA Relief Planning</i>	13
4.4.4 <i>Administration of Canadian Numbering Resources</i>	13
4.5 Term of Administration	15
4.6 Impacts of Governmental and Industry Activities	15
4.6.1 <i>Governmental Changes</i>	15
4.6.2 <i>CSCN Changes to Number Resource Assignment Guidelines</i>	15
4.7 Performance Review Process.....	15
4.7.1 <i>Performance Requirements</i>	16
4.7.2 <i>Performance Review Process</i>	16
4.8 Dispute Resolution.....	16
4.9 Enterprise Services.....	17
4.10 Industry Notification Service.....	17
4.11 Hours of Operation	18
4.12 Telecommunications and Systems Requirements.....	18
4.13 Security Requirements	22
4.14 Disaster Recovery Plan	23
4.15 The CNA Internet Website	23
4.16 Proprietary Information Rights.....	25
4.17 Preparation Period, Transition Plan and Implementation Schedule	26
5.0 RFP SCHEDULE AND DEADLINES	26
6.0 ADDITIONAL CONTRACTUAL TERMS.....	27
7.0 RFP PROCESS	30
7.1 Right to Amend or Revise RFP	30
7.2 Evaluation Process	30
7.3 Contractual Obligations	31

7.4	Contract Negotiations	31
7.5	Publicity	31
7.6	RFP Accuracy	31
8.0	RESPONSE GUIDELINES.....	32
8.1	General Guidelines.....	32
8.2	Notice of Intent to Respond	32
8.3	Questions.....	32
8.4	Proposals	33
	8.4.1 <i>Quantity of Copies and Format</i>	33
	8.4.2 <i>Proposal Contents</i>	34
8.5	Prospective Vendor Responses to CNAC Questions.....	34
9.0	TELECOMMUNICATIONS INDUSTRY GUIDELINES.....	35
10.0	ESTIMATED CNA WORK VOLUMES	36
11.0	SUGGESTED PERFORMANCE REVIEW PROCESS AND STANDARDS	43
	ANNEX A - TEMPLATE FOR RESPONSES	49

CONFIDENTIALITY

This Request for Proposals (RFP) and any other information furnished under this RFP, regardless of the medium, is to be used solely for the purposes of responding to this RFP. All such documents and information issued with this RFP and submitted in response to this RFP shall remain the property of the Canadian Numbering Administration Consortium Inc./Consortium de Gestion de la Numérotation Canadienne Inc. (CNAC). CNAC may identify some information as confidential and, in such case, prospective vendors shall have a fiduciary obligation to keep all such information confidential and to return or destroy any such confidential information upon request of CNAC. Reproduction of any part of this RFP is authorized only for the preparation of your response to this RFP. Any confidential information shall not be disclosed to any of your employees who do not have a "need to know" or to any third party without the prior written consent of CNAC. All copies of any such confidential portions (in all forms and media) are to be destroyed when no longer required in connection with this RFP.

Any information included in a proposal submitted in response to this RFP that is considered to be proprietary or confidential must be clearly marked as such. Such information should be submitted in a format that will allow CNAC to separate the parts of the proposal that are considered proprietary or confidential from other parts of the proposal. All pricing information in a proposal should be marked confidential.

CNAC will use its reasonable best efforts to ensure that information submitted in a proposal which is marked proprietary or confidential will not be disclosed to any person other than the directors, officers, employees, agents and contractors of CNAC or its respective shareholders who have a "need to know" such information or its professional advisors for the purposes of assisting in the vendor selection process. Such information will not be shared with the vendor that currently performs the Canadian Numbering Administration (CNA) function.

Information included in a proposal which is marked proprietary or confidential but which:

- is or becomes generally available to the public;
- CNAC or its directors, employees, agents, and contractors receive from a third party who had obtained the information lawfully and was under no obligation of secrecy; or
- CNAC or its directors, employees, agents and contractors can show was in its possession before receipt of such information in the proposal;

shall not be regarded as proprietary or confidential information by CNAC.

CNAC will have the right in any event to make public the names of all persons or entities submitting proposals in response to this RFP.

1.0 PURPOSE OF RFP

The purpose of this Request for Proposals (RFP) is to invite prospective vendors to submit proposals to operate as the Canadian Numbering Administrator (CNA) for the five-year period from 1 January 2019 to 31 December 2023 following the expiry of the current contract with the existing vendor on 31 December 2018.

The existing vendor, Leidos Canada Inc., has advised CNAC that it will not be submitting a proposal as part of the RFP process. As a result, Leidos Canada Inc. will cease to operate as the CNA on 31 December 2018. Commencing on 1 January 2019, the CNA will be a new vendor. Pursuant to the current agreement between CNAC and Leidos Canada Inc., a complete copy of the system used by Leidos Canada Inc. to administer Canadian numbering resources, including the CNA website, and all software and databases will be delivered to CNAC and will be available for use to the new vendor CNA.

The CNA is responsible for the administration of Canadian numbering resources for the Canadian telecommunications industry. The administration functions expected to be performed are more fully set out elsewhere in this RFP. The CNA will also be required to work cooperatively with the North American Numbering Plan Administrator (NANPA), the Canadian Radio-television and Telecommunications Commission (CRTC) and Canadian telecommunications service providers (TSPs) to ensure effective and efficient use of North American Numbering Plan (NANP) resources in Canada.

The NANP is the basic addressing scheme for the Public Switched Telephone Network (PSTN) in the following countries currently in Country Code 1 (formerly known as World Zone 1): Anguilla, Antigua & Barbuda, Bahamas, Barbados, Bermuda, British Virgin Islands, Canada, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Montserrat, Sint Maarten, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago, Turks & Caicos Islands, and the United States (including Puerto Rico, the U.S. Virgin Islands, Guam, Northern Mariana Islands and American Samoa). The format of the NANP follows International Telecommunications Union (ITU) standards as detailed in Recommendation E.164.

The costs to administer Canadian numbering resources are required by the CRTC to be funded by the individual Canadian TSPs that use, and obtain a benefit from, Canadian numbering resources. The total cost to administer Canadian numbering resources is collected annually from the TSPs by CNAC through the CNAC funding mechanism.¹ Under this funding mechanism, CNAC, through a third party billing and collection agent, annually bills and collects the total estimated amount to administer Canadian numbering resources for the year from TSPs. The CNA may, at the request of individual TSPs, also provide Enterprise Services and/or Industry Notification Service, for which services the CNA will be responsible for billing and collecting such amounts directly from individual TSPs. Additional information as to the billing for services is further described in section 4.10 below.

¹ The current funding mechanism was proposed by the Canadian Steering Committee on Numbering (CSCN) and approved by the CRTC.

This RFP was developed and approved by Canadian Numbering Administration Consortium Inc./Consortium de Gestion de la Numérotation Canadienne Inc. (CNAC). CNAC is releasing this RFP, and will be responsible to receive written questions from vendors, respond to those questions, receive vendor proposals, evaluate the proposals, select a short list of prospective vendor(s), undertake contractual negotiations with prospective vendor(s) relating to their proposals, and execute a contract with a successful vendor.

This RFP identifies tasks currently performed by the CNA that will continue, and additional tasks that are known to be required, during the next contract term. During the CNA contract term, these tasks may be modified or deleted and new tasks may be added. Such future modifications, deletions, and additions may be identified by CNAC, or by the CRTC. Any contract entered into with a vendor will provide that such modifications, deletions and additions may be made subject to negotiation of appropriate terms and conditions (e.g., compensation, performance measures) between the vendor and CNAC.

2.0 ADMINISTRATIVE INQUIRIES REGARDING THIS RFP

Any administrative inquiries (e.g., questions, explanation of the schedule in section 5.0 of this RFP, etc.) related to this RFP must be directed to CNAC at the following address:

Mr. Douglas Birdwise
CNAC Business Manager
109 Westpark Drive
Ottawa, Ontario Canada
K1P3G4

Telephone: (613) 830-0081
Email: douglas.birdwise@sympatico.ca

Where CNAC determines that an inquiry relates to non-administrative matters, CNAC reserves the right to direct that the inquiry be submitted as a formal question, in accordance with the process set forth in section 8.3 of this RFP.

3.0 BACKGROUND

In 1999, the position of the CNA was created by the CRTC and the task of selecting and supervising the CNA was delegated to CNAC. Science Applications International Corporation (SAIC Canada) was contracted by CNAC to be the initial CNA for a five-year term from January 1, 1999 to December 31, 2003 and SAIC Canada assumed responsibility for the administrative and assignment functions associated with Canadian numbering resources which had previously been performed by the CRTC, Industry Canada and incumbent Canadian telephone companies. Subsequently, CNAC renewed the contract with SAIC Canada for three additional five-year terms from January 1, 2004 to December 31, 2008, from January 1, 2009 to December 31, 2013, and from January 1, 2014 to December 31, 2018. SAIC Canada changed its name to Leidos Canada during the term of the most recent contract.

CNAC oversees the CNA through its contractual relationship with the CNA. The scope of CNAC's role as a manager of the CNA depends, to a large extent, on the regulatory framework adopted by the CRTC with respect to the administration of numbering resources from time to time.

The provision of number administration services under this RFP is subject to the provisions of the *Telecommunications Act*, particularly section 46 of the *Telecommunications Act*. Section 46 allows the CRTC to administer numbering resources, delegate any of its powers over number administration to any person including any body created by the CRTC for that purpose, and regulate the rates and manner in which any person provides services relating to numbering resources.

Any numbering resources allocated to Canada by any entity (e.g., the International Telecommunications Union (ITU) or NANPA) become national public resources to be managed under numbering assignment guidelines developed or adopted by the Canadian Steering Committee on Numbering (CSCN), as agreed to by the CRTC Interconnection Steering Committee (CISC), and approved and/or mandated by the CRTC.

The CSCN is a public committee comprised of various industry representatives and interested parties that was initiated to facilitate implementation of Telecom Decision 97-8, *Local Competition* (1 May 1997) that, through an open public forum, considers and resolves numbering resource issues. As per item six of Appendix 1 of the CISC Administration Guidelines (see <http://www.crtc.gc.ca/cisc/eng/cag.htm>), the mandate of the CSCN is to undertake tasks related to numbering issues on matters assigned by the CRTC that fall within the scope of the CRTC jurisdiction. Upon completion of the tasks assigned, reports are forwarded to the CRTC for consideration and/or further action.

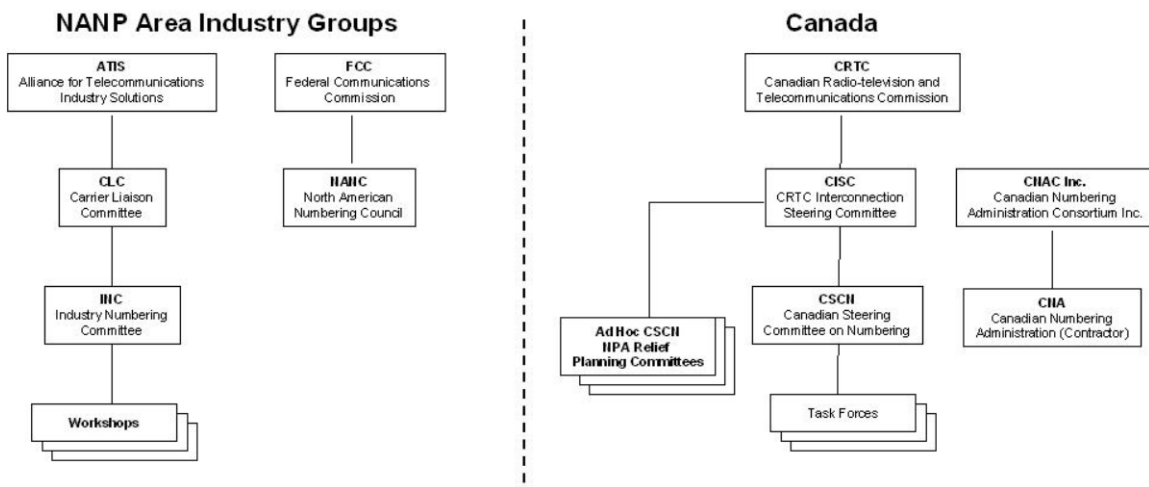
In addition, the CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guidelines (CSCN Administrative Guidelines) (see <http://www.crtc.gc.ca/public/cisc/c-docs/CNRE053A.doc>) states that the CSCN is responsible for:

- a) developing number planning and implementation strategies for the Canadian telecommunications industry;
- b) ensuring that numbering resources are always available for Canadian TSPs and customers;
- c) ensuring that the administration of numbering resources does not confer an undue advantage upon any entity nor inhibit the timely introduction of new telecommunications services or competition in these services in Canada;
- d) ensuring the efficient, effective and equitable administration and use of numbering resources in Canada;
- e) providing input on Canadian numbering policies to the CRTC, on request, via the CISC process;
- f) monitoring changes to NANP guidelines developed by the Industry Numbering Committee (INC) or North American Numbering Council (NANC) that may affect the administration of numbering resources in Canada;
- g) promoting CISC agreed positions on numbering issues in North American

- telecommunications industry fora;
- h) recommending to the CRTC, via the CISC process, acquisition of numbering resources for the Canadian telecommunications industry;
- i) liaising with the Alliance for Telecommunications Industry Solutions (ATIS) INC on numbering issues where the CSCN achieves a consensus that such a liaison is required; and,
- j) obtaining CRTC approval for liaison with other North American fora, external agencies and government bodies (e.g., ATIS, NANPA, NANC, Federal Communications Commission (FCC)) on numbering issues.

Information about the CNA and its activities can be obtained from the CNA web site at www.cnac.ca and the CRTC web site at <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>.

Industry Numbering Structure



At the date of this RFP:

- a) This RFP does not contain any references to a relationship between the CNA and the Canadian Local Number Portability Consortium (CLNPC) or the National Portability Administration Center (NPAC) related to number portability administration in Canada. Certain number administration guidelines may require the CNA to communicate with the CLNPC or to coordinate its activities with those of the CLNPC in certain circumstances.
- b) There is no requirement for the CNA to interface with any Local Number Portability (LNP) database, including the NPAC SMS database. Specific activities, which may require the vendor selected as the CNA to interface with any LNP database, may be set out in CSCN guidelines that may be adopted, or amended, from time to time after the date of this RFP.

- c) There has not been any CSCN recommendation or CRTC approval for number pooling in Canada.

In the event that a formal relationship with CLNPC is required and/or number pooling is adopted, additional duties, if any, would be negotiated with the vendor selected as CNA as per section 4.6.2 of this RFP.

4.0 REQUIREMENTS

4.1 Eligibility to Submit Proposals

CNAC may award a contract for the performance of the CNA functions only to a vendor that is a "neutral Canadian non-governmental entity" which is defined as a vendor that satisfies each of the following three eligibility criteria which requires that the vendor:

- 1) is not a telecommunications service provider (TSP), is not controlled by, or does not control, any TSP, and is not affiliated, by common ownership or otherwise, with a TSP. A TSP is an entity, which provides telecommunications services to the public for compensation. For the purpose of this RFP, a person is "controlled" by another person when the person is affiliated with that other person or is controlled in any manner that results in control in fact, whether directly through the ownership of securities or indirectly through a trust, agreement or arrangement, the ownership of any body corporate or otherwise. The definition of "affiliated" shall be based on the definition of "affiliate" and the meaning of "affiliated body corporate" set out, respectively, in subsections 2 (1) and 2 (2) of the Canada Business Corporations Act;
- 2) is a Canadian entity (i.e., a person, partnership or corporation established or recognized under the laws of Canada, or any province or territory thereof) resident in Canada; and
- 3) is not a governmental body (e.g., government department, commission or agency) and is not owned by or affiliated with, any governmental body.

Non-Canadian entities may submit responses to this RFP; however, they must create Canadian entities with staff and premises in Canada for the purpose of executing a contract with CNAC and for performing the functions of the CNA.

4.2 Subcontractors

Prospective vendors may engage the services of subcontractors to provide one or more elements of its CNA solution. However, the CNA shall be the single point of contact for CNAC under the contract to be signed with a prospective vendor and must remain responsible for the work of any subcontractor. Responses to this RFP shall clearly state the names and the roles and responsibilities of any and all subcontractors, which will be providing parts of the total solution under the direction of the prospective vendor. Any vendor subcontractor must also satisfy the three requirements set out above to be a "neutral Canadian non-governmental entity".

4.3 Neutrality

Each prospective vendor must identify in its proposal, both in respect of itself and in respect of any subcontractors to be engaged by the prospective vendor, the nature and extent of existing or pending corporate, financial, contractual or other material relationships with CNAC and its respective directors, officers, employees, agents, contractors and shareholders, and with Canadian TSPs, including telecommunications common carriers and resellers, who may make use, directly or indirectly, of Canadian numbering resources and the CNA's services as defined in this RFP. All proposals must contain a detailed description of the operational, administrative and procedural practices proposed by the prospective vendor to ensure that the CNA services will be provided to all TSPs in Canada without undue discrimination or preference. Evaluation of these safeguards will be an important part of the process used by CNAC in the selection of the vendor.

4.4 Requirements Specification

The mandate of the CNA, under contract to CNAC, is to provide numbering administration services to the Canadian telecommunications industry under the supervision of CNAC in accordance with the terms of the agreement to be entered into with CNAC. The functions to be performed by the CNA are described in number administration and other guidelines and documents developed or adopted by the CSCN, agreed by the CISC and approved by the CRTC from time to time. The CSCN, the CISC and the CRTC may modify some and/or all of these guidelines and documents in the future. Current copies of applicable guidelines and related documentation are identified in section 9.0 of this RFP and may be obtained from the CNAC web site at <http://www.cnac.ca/>.

CNAC has examined the volume of work associated with performing numbering administration functions in Canada during past years and estimated the volume of work expected in future years. CNAC does not warrant the accuracy of these estimates, as the historical work volumes have varied significantly from year to year and the impact of the changing economic, competitive and regulatory environment is uncertain. This information is provided in this RFP solely as a guideline to assist vendors in preparing their proposals and the information provided is not a guarantee of the future work to be expected.

The functions required to be performed by the CNA are split into four categories: (a) CSCN Secretary; (b) NANPA-Administered Resources; (c) CO Code Administration; and (d) Canadian Numbering Resource Administration. Each of the functions required to be performed by the CNA are summarized by category below. This is a non-exhaustive list of functions that CNAC would expect to include in any contract with a vendor, and these functions are in addition to the terms and conditions specified in other parts of this RFP. Any contract negotiated and executed by CNAC and a vendor may encompass additional functions and may contain other terms and conditions as may be negotiated between CNAC and the vendor.

4.4.1 CSCN Secretary

The CNA shall perform the duties of the CSCN Secretary in accordance with the CSCN Administrative Guidelines, as may be amended from time to time. Such duties include but are not limited to:

- 1) Attend and chair all meetings of the CSCN;
- 2) Assign a number to each CSCN “TIF” (short for “Task Information Form”, the means by which work is managed and performance tracked) upon acceptance of the TIF by the CSCN, and confirm that number when the TIF has been accepted by the CISC;
- 3) Assign a number to each TIF Report (a report prepared on the completion of a task) approved by the CSCN;
- 4) Maintain a centralized file of the following documents:
 - a) Numbering administration guidelines applicable in Canada,
 - b) TIFs, TIF-related documents and TIF Reports,
 - c) Other documents requested by the CSCN (e.g., incoming and outgoing correspondence, CNA Reports).
- 5) Record the minutes of all CSCN meetings, including attendance, and distribute them in "draft" form to the CSCN preferably within 5, but no later than 10, business days after the meeting. If any concerns are raised within 10 business days of the date that the CNA distributes the draft minutes to the CSCN, the CSCN Chair will attempt to resolve the concern with the assistance of the CSCN Secretary and the parties involved. If necessary the CSCN Chair shall convene a CSCN conference call to resolve any concerns about the minutes. The CNA shall submit the approved minutes to the CRTC for posting on the CRTC CISC website. The minutes of CSCN meetings shall include:
 - a) List of participants,
 - b) List of Agenda items (e.g., TIFs) discussed,
 - c) Brief summary of discussion of each Agenda item,
 - d) Points Noted at the request of participant(s) including attribution if requested,
 - e) Agreements Reached (e.g., meeting agenda(s), acceptance of new TIFs, change in status or deletion of TIFs, TIF Reports, meeting/conference call dates and locations, outgoing CSCN correspondence, etc.),
 - f) Action Items including clear statements of what is to be done, who will do it, and when it is to be accomplished.
- 6) Establish and maintain a CSCN Participant List and an associated CSCN E-mail Address List on the CNA web site, including any special lists requested by the CSCN (e.g., CSCN ENUM participants list). The CNA shall notify the CSCN participants via e-mail when the Participant and E-mail Address lists are modified on the CNA website;
- 7) Maintain and edit draft documents (e.g., numbering administration guidelines, correspondence) at CSCN meetings, upon request;
- 8) Submit electronic copies of all CSCN meeting minutes and documentation to the CRTC at procedure@crtc.gc.ca for publication on the CRTC website at www.crtc.gc.ca; and,
- 9) Perform such other duties as may be prescribed from time to time by the CSCN.

CSCN meetings may be of two types: (1) face-to-face meetings, and (2) conference calls. Face-to-face meetings are held in locations where CSCN participants volunteer to host them. In recent years, CSCN meetings have been held in major Canadian cities including, but not limited to, Ottawa, Toronto, Montreal, Calgary, Vancouver, and London. The full CSCN (excluding task forces) generally meets face-to-face about three times each year for one to three days at a time; however, the quantity of meetings may vary depending upon the workload at the CSCN.

In accordance with the CSCN Administrative Guidelines, establishment of CSCN meeting agendas will be conducted by teleconference at a minimum of two weeks prior to a coinciding CSCN meeting. The CSCN may also hold conference calls as necessary to address numbering issues as they arise. Such CSCN conference calls are generally scheduled at the request of the chair or participants in order to address issues that must be addressed prior to the next scheduled face-to-face meeting of the CSCN. CSCN conference calls generally last from one to three hours depending upon the quantity of issues under discussion and the nature of those issues.

CSCN minutes are to be issued in accordance with the requirements contained in the CSCN Administrative Guidelines.

The CNA may be required to provide professional editorial services upon request of the CSCN to assist in the final stages of preparation of new guidelines and revisions of existing guidelines. The determination of whether this service is required will be made during contract negotiations and will include consideration of the price quoted by vendors for providing these services.

4.4.2 The CNA Role in NANPA-Administered Resources

The CNA shall perform the following tasks with respect to the NANP number resources administered by the NANPA:

- 1) receive, validate and forward applications from Canadian entities to the NANPA for assignment of:
 - a) International Inbound NPA 456 NXX codes;
 - b) PCS/N00 NXX codes (NPA 500 NXXs) reserved for Canadian entities;
 - c) NPA 900 NXX codes;
 - d) NPA 800-855-XXXX line numbers;
 - e) 555-XXXX line numbers;² and
 - f) Carrier Identifications Codes (CICs).
- 2) maintain records for N11 Service Codes in accordance with CSCN directives;
- 3) initiate reclamation of numbering resources when required in accordance with numbering guidelines.

² In Telecom Decision CRTC 2017-203, *CISC Canadian Steering Committee on Numbering – Consensus report CNRE120A regarding 555 line numbers* (16 June 2017), the CRTC approved CSCN Report CNRE120A directing that no further 555 resources are to be assigned in Canada.

4.4.3 Central Office Code Administration Including NPA Relief Planning

The CNA shall perform the following tasks with respect to CO Code and NPA Relief Planning activities:

- 1) The CNA shall administer Central Office codes (CO Codes) within Canadian geographic Numbering Plan Areas (NPAs) in accordance with the Canadian Central Office Code (NXX) Assignment Guidelines (including reclamations and other administration tasks where necessary).
- 2) The CNA shall perform NPA relief planning functions in accordance with the CNA Roles and Responsibilities specified in the Canadian NPA Relief Planning Guidelines and the NPA Allocation Plan and Assignment Guidelines.
- 3) The CNA shall conduct Canadian Numbering Resource Utilization Forecasts (C-NRUFs) and other C-NRUF tasks in accordance with the Canadian Numbering Resource Utilization Forecasts (C-NRUF) Guideline.

4.4.4 Administration of Canadian Numbering Resources

The CNA shall perform the following administrative tasks in relation to Canadian numbering resources:

- 1) receive, validate and process requests and maintain records for NPA 600 NXX Codes (including reclamations and other administrative tasks where necessary);
- 2) receive, validate and process requests and maintain records for Canadian Non-Geographic NPA NXX Codes (including reclamations and other administrative tasks where necessary);
- 3) receive, validate and process requests and maintain records for Emergency Service Routing Digit Blocks (ESRD Blocks) (including reclamations and other administrative tasks where necessary);
- 4) administer International Mobile Station Identity codes (IMSI) (including reclamations and other administrative tasks where necessary);
- 5) administer System Identification Number (SID) codes (including reclamations and other administrative tasks where necessary);
- 6) receive, validate and process requests and maintain records for MIN Block Identifier (MBI) Codes (including reclamations and other administrative tasks where necessary);
- 7) maintain and publish the assignment information for Canadian numbering resources including approved applications of N11 codes in Canada;
- 8) prepare and publish a CNA annual report on the status of Canadian numbering resources (see past annual reports at www.cnac.ca);
- 9) seek clarification of industry guidelines from the CSCN, as necessary (e.g., to assist the CNA in applying the guidelines where guidelines are not clear);
- 10) provide reports to CSCN on various numbering topics upon request;
- 11) identify to interested parties which numbering resource guidelines are applicable in Canada and provide clarification with respect to the application of any such guidelines;
- 12) participate in the CNA performance review process;

- 13) investigate number assignment and administration issues as requested by the CSCN and CNAC;
- 14) seek resolution, as necessary, from CSCN and/or the CRTC of number assignment and administration issues including interpretation of industry guidelines of concern to the CNA;
- 15) participate in and provide informational support to the CSCN and any special CSCN task forces on request;
- 16) liaise and coordinate the CNA's activities with the NANPA to ensure effective and efficient use of NANP resources in Canada;
- 17) establish and maintain continuing relationships with TSPs, NANPA, Telcordia, and the CRTC on numbering administration matters;
- 18) develop and maintain knowledge of numbering activities at the Industry Numbering Committee (INC) and provide a written report to the CSCN after each INC meeting, identifying issues and assessing the potential impacts of any INC activities on Canadian numbering and on the CNA functions;
- 19) respond to requests from Canadian TSPs, Industry Canada, the CRTC and the media with respect to Canadian numbering resources and their administration;
- 20) be the primary repository for numbering information for the Canadian telecommunications industry;
- 21) receive, validate and forward applications for National Business Group Identifiers (NBGIs) from Canadian entities to Telcordia for assignment and maintain the associated records (including reclamations and other administrative tasks where necessary);
- 22) be able to communicate, both orally and in writing, in the two Canadian official languages, English and French;
- 23) communicate with the media (e.g., newspapers, radio, television, etc.) as directed in various guidelines in a cost-effective manner to provide basic factual information on numbering administration matters such as NPA relief planning and implementation; and
- 24) monitor and track SS7 assignments to Canadian entities.

There is no historical information available regarding the number and extent of reports to the CSCN on various numbering topics upon request. It is anticipated but not guaranteed that such requests for reports will be made about four times per year. The CNA prepares a report for each CSCN meeting providing an update on NPA relief planning activities, in addition to the report on INC activities.

During the previous contract periods, the CNA has generally attended all CSCN and related task force meetings and conference calls in order to keep aware of the issues and the potential impacts on CNA activities. In recent years the CSCN has conducted all meetings as CSCN meetings and avoided the use of special task forces; however, should the CSCN choose to use a special task force during the contract period, the CNA will be expected to attend the meetings of such task force.

It is not expected nor required that the CNA attend INC and INC Task Group or Working Group meetings, however, the CNA is required to develop and maintain knowledge of numbering activities at the INC and assess the impacts of any INC activities on Canadian numbering and CNA functions. The CNA has the discretion to determine how to accomplish this task. CNAC

expects that this task could be done, by monitoring the INC minutes, reports, and other outputs. Nevertheless, the CNA may attend INC meetings at its discretion if it determines attendance would be beneficial to performing its duties as CNA.

4.5 Term of Administration

The term of the agreement to be entered into between CNAC and the selected vendor shall be for a period of five (5) years commencing on January 1, 2019. It is anticipated that any contract entered into with a vendor for the provision of the CNA functions will provide that, at least six months prior to the termination of the initial or subsequent five-year term of administration, the term of administration may be renewed by CNAC, at its discretion, for an additional period of up to five years.

4.6 Impacts of Governmental and Industry Activities

4.6.1 Governmental Changes

In the future, governmental and regulatory authorities may issue rules, requirements or policy directives that may increase, decrease or otherwise impact the functions to be performed by the CNA. The CNA shall, within ten business days of a request from CNAC, or at its own initiative, assess the impact of such rules, requirements or policy directives on its operations and advise CNAC in writing of any changes that the CNA believes are required to its contract with CNAC (e.g., functions, performance monitoring, remuneration, etc.), including the rationale for such changes, in order to implement any such rules, requirements or policy directives. In such an event, CNAC and the CNA shall negotiate any changes to the CNA's contract that are necessary to respond to the governmental or regulatory-initiated changes.

4.6.2 CSCN Changes to Number Resource Assignment Guidelines

Over time, the CSCN may establish or adopt new or amended numbering resource plans, administrative directives, assignment guidelines, and procedures that may affect the functions to be performed by the CNA. When this occurs, the CNA shall, within ten business days of a request from CNAC, or on its own initiative or at the request of the CSCN, assess the impact of such matters on its operations and advise CNAC of any changes that it believes are required to its contract with CNAC (e.g., functions, performance monitoring, remuneration, etc.), including the rationale for such changes, in order to implement the new or amended numbering resource plans, administrative directives, or assignment guidelines. In such an event, CNAC and the CNA shall negotiate any changes to the CNA's contract that are necessary to respond to the CSCN-initiated changes.

4.7 Performance Review Process

The CNA's performance shall be regularly monitored by CNAC which will include, at a minimum, monthly work volume reports and quarterly reviews.

4.7.1 Performance Requirements

Vendors shall define, in their proposals, proposed performance standards for the CNA functions identified in this RFP. Final performance standards will be negotiated and be included in the contract between the selected vendor and CNAC. To assist vendors in responding to this RFP, section 11.0 contains suggested performance standards to be considered by prospective vendors.

4.7.2 Performance Review Process

It is anticipated that CNAC shall review the performance of the CNA on a scheduled basis (at least quarterly) and that the review shall include:

- 1) monitoring of the performance of tasks in accordance with standards;
- 2) feedback on adherence to performance standards; and
- 3) establishment of a remedial action plan, if required.

Vendors shall describe proposed performance monitoring mechanisms in their proposals.

CNAC's CNA performance review process shall not preclude telecommunications industry participants, CRTC, CNAC or any other person from identifying performance problems and reporting the same to the CNA as they occur from time to time, and from seeking resolution of such performance problems in an expeditious manner. If performance problems are identified to the CNA, the CNA shall be required to document the problem, and attempt to address and resolve such problem within ten business days. The CNA shall maintain a written log of performance problems brought to its attention by telecommunications industry participants, CRTC, CNAC or any other person. Upon request of CNAC, the CNA shall make the log available to CNAC. Upon request of CNAC, the CNA shall investigate any performance problems identified by CNAC or a telecommunications industry participant and report back to CNAC within a period of not more than ten business days from the date of request by CNAC or as otherwise directed by CNAC in emergency situations. The CNA's report shall include the results of such investigation and any corrective action taken or to be taken. Any corrective action to be taken by the CNA shall be performed within a reasonable amount of time. The CNA shall inform the telecommunications industry participant, if any, of the investigation and any corrective action taken, or to be taken.

Prospective vendors shall provide a description of their proposed problem management system for addressing problems identified by telecommunications industry participants, CRTC, CNAC or any other person.

4.8 Dispute Resolution

The CNA shall participate in the appropriate CISC dispute resolution process, as necessary (see CISC Administrative Guidelines for details; those Guidelines are available at the CRTC CISC site at www.crtc.gc.ca). In order to guide its activities in this process, the CNA shall utilize any applicable industry numbering resource guidelines, regulatory decisions made by the CRTC,

policy statements issued by Industry Canada, or such other guidelines, decisions, directives or policy statements as may be applicable in the circumstances.

Normally, the CNA would only be involved in disputes directly related to its numbering administration responsibilities. There can be situations where the resolution of disputes not directly related to the CNA can impact the ongoing work of the CNA. For example, the CSCN might conclude that a dispute about one of its numbering resource guidelines is best resolved by changing the guideline. In such a case, the CNA may be asked to evaluate the impact of the proposed changes in the manner as outlined in section 4.6.2.

4.9 Enterprise Services

Enterprise services (Enterprise Services) are any services provided by the CNA to TSPs that are not identified in this RFP and are not specifically addressed in the agreement with CNAC, as amended from time to time. At its option, the CNA may provide Enterprise Services to individual TSPs on request, provided that the performance of all Enterprise Services shall be subject to the following conditions:

- 1) Enterprise Services shall be performed without jeopardizing the CNA's performance of its duties and responsibilities in a timely manner as defined in this RFP and any contract with CNAC;
- 2) Proprietary/confidential information acquired by the CNA in the course of performing CNA duties shall not be used in the provision of any Enterprise Service; and
- 3) The CNA shall avoid conflict of interest situations in the provision of any Enterprise Service.

Enterprise Services and their associated fees shall be subject to separate agreement between the CNA and its respective enterprise client and CNA shall be solely responsible for billing and collecting any fees charged for Enterprise Services directly from TSPs.

Enterprise Services need not be priced separately and included with the proposal in response to this RFP. However, the Industry Notification Service specified in section 4.10 below is a mandatory Enterprise Service that must be offered to Canadian TSPs by the CNA during the term of the Agreement.

4.10 Industry Notification Service

Upon request of a Code Holder (the entity to which a Central Office Code has been assigned), the CNA shall input the rating and routing information set out in Part 2 - Routing and Rating Information Forms in the Canadian Central Office Code (NXX) Administration Guidelines into the Telcordia Traffic Routing Administration (TRA) Business Integrated Routing and Rating Database System (BIRRDs) database (Industry Notification Service). Such service shall be performed at a price to be negotiated with and paid directly by the Code Holder making the request. While the CNA is required to offer this service to all Code Holders, individual Code Holders may instead perform the function themselves or have the function performed by an

entity other than the CNA. CNA shall be solely responsible for billing and collecting any fees charged for Industry Notification Services directly from the TSPs that request such service.

4.11 Hours of Operation

The CNA shall maintain hours of operation of at least four hours of the normal business day (i.e., between 8:00 AM to 5:00 PM) from Monday to Friday, excluding statutory holidays, in each Canadian time zone during the term of the agreement to entered into with CNAC. The four hours per day may vary across the time zones in Canada, however such hours must be consistent on a day-to-day basis in each time zone.

In addition, the CNA must provide mechanisms (i.e., voice-mail, e-mail, and facsimile) to receive messages on a 24-hour per day basis. The CNA shall respond within one business day to all messages received outside the hours of operation identified above.

4.12 Telecommunications and Systems Requirements

The CNA must establish appropriate voice and data communications systems to perform its functions. Prospective vendors must propose and describe a voice and data communications plan (i.e., voice and data systems, computer facilities, website, etc.) that they intend to use to provide CNA services.

Vendors are encouraged to submit in their proposals suggestions as to how telecommunications and mechanized systems could be utilized to improve the efficiency and effectiveness of the CNA's operations (e.g., on-line access to a mechanized numbering resource application system).

The Canadian Numbering Administration System Software (CNAS Software) utilized by the current CNA to support CNA operations will be made available to the new vendor for use during the next five year contract period. The vendor may at its option use this software or use other software to support the provision of its services under the contract. A copy of the CNAS Software is held in escrow by the CNAC Corporate Secretary.

CNAS Software

The CNAS Software is a database developed by Telcordia to assist the CNA in the administration of Central Office (CO) Codes, MBI Blocks, ESRD Blocks and Non-Geographic Codes. The present database size is in the order of 500 MB.

The CNAS Software currently runs on the following platforms:

- Microsoft Windows Server 2012 Standard (Version 6.2);
- Microsoft SQL Server 2012 Standard Edition (Version 11.0);
- Microsoft Internet Information Services Version 8.0.

The following is a general description of the content and purpose of the files located within the main folders of the CNAS software:

- **CNA-MLM**
CNA Mailing List manager web application project and source code files coded in .Net to provide management of contacts and mailing lists for the CNA.
- **CNAS**
ASP source code for the Canadian Numbering Administration System (CNAS) as provided by Telcordia.
- **CNAS_Supp (Date Calculator, EAS Checker, Non-Geographic)**
Web Application project and source code files coded in .Net to provide a date calculator, EAS checking and resource management of the Non-Geographic codes.
- **DTSX**
Microsoft SQL Server Data Transformation Services Package XML File Format Files. Used to automate the import or export of data or metadata using timed tasks.
- **ESRD**
Emergency Service Routing Digit (ESRD) application used to process the resource management of the ESRD codes. Files include the application ASP code pages.
- **ExportStatusPages**
Custom .Net console application used to export status code pages and files from the CNAS database in both friendly HTML and machine readable data format. These are published daily (work days) on the www.cnac.ca website.
- **MBIs**
MIN Block Identifier (MBI) application used to process the resource management of the MBI codes. Files include the application ASP code pages.
- **StoredProcedures**
Microsoft SQL Server database stored procedures for the CNAS system. This folder may contain duplicates of original CNAS files located under the CNAS folder.
- **Website**
Windows command file and *NIX shell scripts used in the automated retrieval of www.cnac.ca website statistics.

The current CNA has developed the following additional tools to perform the CNA function which will also be available for use by the new vendor:

1. CNA Internet Website

The CNA Internet Website was developed and is maintained using Microsoft Expression Web and published to primary and backup locations using FTPSync (freeware). As a general rule, Word and Excel documents are converted into Portable Document Format (PDF) using the Microsoft Save-as-PDF MS Office add on or Adobe Acrobat Professional prior to publishing to the web site.

2. Additional Tools for CO Codes

To assist with CO Code assignments the following are used:

- Date Calendar – this application was developed in Microsoft Visual Basic 6.0 and for any given date gives -45, 45, 52, 66, 175 and 227 days;
- EAS – this application was developed in the Microsoft .Net 1.1 environment to find primary, second and tertiary exchanges based on the available tariff data that has been entered into the system; and
- Tracking system – the Liberum Help Desk (freeware) software built using Active Server Pages (ASP) is used to track the status of various CO Code applications.

To publish the CO Code data to the web site the following have been developed:

- Data Transformation Services (DTS) script to produce the csv file;
- SQL stored procedure to produce the individual NPA web pages;
- Bash job running in Cygwin to update the datetime stamp in each file, zip (freeware) to zip the csv file and uploaded to web site using ncFTP; and
- BLAT to e-mail administrative staff of any problems with the process.

3. MBIs

The MIN Block Identifier (MBI) application is a web interface using ASP on the following platform:

- Microsoft Windows Server 2003 Standard Edition Service Pack 2;
- Microsoft SQL Server 2000 Service Pack 3;
- Microsoft Internet Information Services 6.0

The underlying ASP files were developed using a standard text editor (e.g. Microsoft Notepad). In some cases these files rely on the use of a stored procedure that resides within the Microsoft SQL Server 2000. The stored procedures were developed using SQL Query Analyzer.

The web interface allows the user to:

- Conduct an MBI database lookup
- Complete an MBI Application - Part 1: Full Block based on NPA-NXX where the user selects the rate centre

- Complete an MBI Application - Part 1: Full Block based on NPA-NXX where no rate centre is selected
- Complete an MBI Application - Part 1: Full Block based on NPA-rate centre
- Complete an MBI Application - Part 1: Partial Blocks based on NPA-NXX where the user selects the rate center
- Complete an MBI In-Service Application - Part 3

To publish the MBI data to the web site the following have been developed:

- DTS script to produce the csv file;
- SQL stored procedure to produce the individual NPA web pages;
- Bash job running in Cygwin to update the datetime stamp in each file, zip to zip the csv file and uploaded to web site using FTPSync; and
- BLAT to e-mail administrative staff of any problems with the process.

4. ESRDs

The Emergency Service Routing Digit (ESRD) application is a web interface using ASP on the following platform.

- Microsoft Windows Server 2003 Standard Edition Service Pack 2;
- Microsoft SQL Server 2000 Service Pack 3;
- Microsoft Internet Information Services 6.0

The underlying ASP files were developed using a standard text editor. In some cases these files rely on the use of a stored procedure that resides within the Microsoft SQL Server 2000. The stored procedures were developed using SQL Query Analyzer.

The web interface allows the user to:

- Conduct an ESRD database lookup
- Complete an ESRD Application - Part 1
- Complete an ESRD Application – Part 3.

To publish the ESRD data to the web site the following have been developed:

- SQL stored procedure to produce the individual NPA web pages;
- Bash job running in Cygwin to update the datetime stamp in each file and uploaded to web site using FTPSync; and
- BLAT to e-mail administrative staff of any problems with the process.

5. Mailing Lists

A Microsoft .Net 2005 (.Net framework 1.1) application has been developed that allows for the maintenance of various mailing lists that are maintained on a Mercury/32 (commercial) mail

server which also uses FTPSync to upload the CSCN and CSCN ENUM distribution lists to the web site.

The contractual arrangement under which the CNAS Software can be available is as follows:

Upon the expiration of the services agreement between the CNAC and SAIC Canada, CNAC has the option to continue to use the CNAS Software and make the CNAS Software available for use by the new vendor during subsequent contract periods.

CNAC has the ability to obtain the CNAS Software in the following two ways:

- 1) if the source code to the CNAS Software is not needed, CNAC can obtain, for no consideration, a royalty-free license (without source code) and can grant a sublicense to the new vendor to allow the new vendor to use the CNAS Software; or
- 2) if the source code to the CNAS Software is needed, CNAC can obtain, upon payment of the amount of US\$150,000 to SAIC Canada, a royalty-free license (with source code) and can grant a sublicense to the new vendor to allow the new vendor to use the CNAS Software and source code. The source code will allow CNAC and/or the new vendor to reproduce, merge, modify, debug, improve, adapt, enhance, reverse engineer, disassemble, decompile the CNAS Software and to create derivative works therefrom.

Prospective vendors must indicate in their proposals whether they will require the CNAS Software or alternatively if they will develop their own software to perform the CNA functions. In the event a prospective vendor requires the CNAS Software, such prospective vendor should indicate whether it will also require the source code and the reasons therefore and the cost to acquire the source code as described above shall be required to be dealt with in your proposal. Any software used by the vendor to provide CNA services will be required to be placed in escrow with CNAC's Corporate Secretary and CNAC and other vendors shall have the right to use such software following the termination of the Agreement for any reason to provide CNA services.

Upon the expiration of the current agreement between CNAC and the current CNA, the obligation of Telcordia to maintain the CNAS Software terminates. However, CNAC has the ability to retain Telcordia to provide maintenance to CNAC or its sublicensees. Prospective vendors who will require the CNAS Software must also indicate if they will require that CNAC retain Telcordia to provide maintenance services for the CNAS Software and the cost to maintain the software as described above shall be required to be dealt with in your proposal.

4.13 Security Requirements

Due to the proprietary nature of certain information that will be received by the CNA, as well as privacy requirements, the CNA must ensure that proper security measures are taken. These measures shall include the establishment of a secured work area with limited access and secured record retention practices. In addition, appropriate security is required for any computer systems that contain number assignment information and proprietary applicant information, including any

system that is connected to any telecommunications network. Prospective vendors shall provide a description of the security systems and procedures that they propose to implement.

4.14 Disaster Recovery Plan

The CNA must have a disaster recovery plan in place and a demonstrated ability to implement the disaster recovery plan if necessary. Prospective vendors shall provide a description of the disaster recovery plan and procedures that they propose to implement. This disaster recovery plan must address all potential types of disasters including, but not limited to, natural disasters (e.g., earthquakes, landslides, volcanic eruptions, floods, hurricanes, tornadoes, blizzards, tsunamis, and cyclones) and human-made disasters (e.g., fires, transport accidents, industrial accidents, oil spills and nuclear explosions/radiation, war and deliberate attack, terrorism, labour unrest and/or strikes). The disaster recovery plan must also address the recovery of all data as well as the operating systems and staff required to perform the functions of the CNA during any recovery period.

4.15 The CNA Internet Website

The CNA shall provide and maintain an Internet website using the URL www.cnac.ca. Prospective vendors may visit the current site at www.cnac.ca to view the current content provided by the current vendor. The CNA Internet website shall contain numbering information that is unique to Canada as per this RFP. The CNA shall:

- a) ensure the form and content available on the CNA website is satisfactory to CNAC, acting reasonably;
- b) update the information available to CNAC and the service users on the CNA website on a timely basis, but at a minimum at least once per week; and ensure that the CNA website is accessible by CNAC and the service users on a 24 hour a day basis to the satisfaction of CNAC, acting reasonably.

More specifically, the following information shall be made available on the CNA Internet website:

1. CNA Information

- a) CNA mandate;
- b) CNA mailing address;
- c) CNA contact names;
- d) CNA contact telephone numbers;
- e) CNA contact facsimile numbers; and
- f) CNA contact e-mail addresses.

2. Canadian Geographic NPA Information

- a) Map of Canada showing Canadian geographic NPAs

3. CO Code Availability and Assignment Status for each Canadian Geographic NPA
 - a) For each Canadian geographic NPA, a list of CO Codes and the status of each (e.g., assigned, reserved, protected, test, available for assignment, in-service, special use, etc.), as well as the name of the exchange area where the code is assigned, the Code Holder's name and OCN (Operating Company Number), and remarks, in a downloadable spreadsheet file format as well as any other file formats required by the CSCN and/or CRTC.
4. All current Number Resource Assignment Guidelines applicable in Canada
 - a) A List of all Numbering Guidelines applicable in Canada (including the CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guidelines) (CSCN Administrative Guidelines); and
 - b) Access to all Numbering Guidelines applicable in Canada (copies of the current applicable guidelines and related forms must be provided on the CNA website by the CNA).
5. Other CNA information or reports as directed by CNAC or the CSCN.
6. Copies of the CNA Annual Reports for the last five years.
7. CSCN Information
 - a) CSCN mission statement;
 - b) CSCN membership list (including company name, contact name, mail address, telephone number, facsimile number, and e-mail address);
 - c) CSCN e-mail listing (updated within 24 hours of notification of a change);
 - d) Current schedule of future full CSCN meetings and conference calls (including task force meetings); and
 - e) Past full CSCN meeting minutes (including file attachments when available).
8. CNAC Information
 - a) CNAC description, history and mandate (what is it, when was it created, what it does, major historical events and dates);
 - b) List of CNAC Shareholder entities (organization names only, not individual names and numbers);
 - c) CNAC Board Chair, President, Business Manager (if any), Corporate Secretary and Billing & Collection Agent contact names, telephone numbers, e-mail addresses, geographic addresses and fax numbers;
 - d) CNAC News Releases (copies of all past and any new future releases);
 - e) CNAC public documents (CNA and CNAC Service User Agreements, CNAC CNA RFP, CNAC Unanimous Shareholder Agreement (USA), CNAC Funding Mechanism); and

- f) Other information requested by CNAC (e.g., CNA annual performance survey questionnaire and summary results).
9. C-NRUF Aggregate Results and related documentation (including past five years' historical CNA C-NRUF Reports and C-NRUF Results).
10. NPA Relief Planning Documentation (meeting minutes, Planning Documents, Relief Implementation Plans, Progress Reports, special C-NRUFs for relief area codes, etc.).
11. CNA website map.
12. Frequently Asked Questions and Responses about numbering matters.
13. Links to other sites of interest (e.g., CRTC, ATIS, ANSI, NANC, NANPA, NECA, Telcordia Technologies Inc. (doing business as iconectiv), Telecom Routing Administration, CLNPC, CISC Numbering Committee, etc.).

This information shall be updated on a timely basis, but at a minimum of no less than once every week except where otherwise noted and/or at the request of CNAC or the CRTC.

Prospective vendors shall describe the security measures they will take to ensure that the website and the information contained on it are adequately safeguarded (i.e., only the CNA should have the capability to create and alter the information).

The CNA should contact the site managers for the following websites, and others as appropriate, to request that Internet links be provided to the CNAC web site: CRTC, ATIS, ANSI, NANC, NANPA, NECA, iconectiv, Traffic Routing Administration, CLNPC, CISC Numbering Committee, and International Telecommunications Union (ITU).

4.16 Proprietary Information Rights

Any industry documentation, website information and any other telecommunications industry information (the Information) in the CNA's possession shall be delivered by the CNA to CNAC or a new vendor designated by CNAC in a medium acceptable to CNAC in the event that the contract between the CNA and CNAC expires or is terminated for any reason. The CNA acknowledges that it does not have any proprietary rights to the Information. For greater certainty, following the termination of the agreement, the Information must no longer be in the possession of the vendor. The CNA shall also, on termination of the agreement, transfer to CNAC or a new vendor designated by CNAC any software licenses, custom developed software, CNAC website information and www.cnac.ca URL domain name, or any other rights of the CNA in any computer database, used or acquired by the CNA, to perform the functions of the CNA. The CNA must provide to CNAC upon request any of the above items at any time for any reason. The CNA must also provide to CNAC upon request demonstrations of their numbering administration software and systems to the CNAC representatives and any parties invited by CNAC.

4.17 Preparation Period, Transition Plan and Implementation Schedule

Prospective vendors shall provide a proposed transition plan and schedule for the prospective vendor to assume the functions of the CNA which satisfy the following requirements:

1. the time for preparing to take over the functions of the CNA (e.g., hire staff, rent premises, purchase equipment and software systems, etc.) shall not exceed 60 working days (the vendor preparation period). At the end of the 60-day period, the vendor shall submit a final transition plan to CNAC for consideration;
2. CNAC shall review, and if acceptable, approve or modify the final transition plan within 30 working days from the date of receipt from the vendor; and
3. the time for implementing the transition plan and assuming all of the CNA functions shall not exceed 60 working days from the date of approval of the 'final' transition plan by CNAC.

Prospective vendors should assume cooperation from the existing CNA in the development and implementation of the 'final' transition plan.

All prospective vendors should include in their proposals a "proposed" transition plan and schedule indicating the main tasks to be undertaken and the time required. In particular, all prospective vendors should indicate compliance with the overall periods for preparation, development and approval of the "final" transition plan and implementing the "final" transition plan as required. The "final" transition plan, including a detailed schedule of meetings and tasks, will be developed by the successful vendor, after its selection and during consultations with the existing CNA vendor and CNAC, as appropriate.

5.0 RFP SCHEDULE AND DEADLINES

It is anticipated that activities associated with this RFP and the selection of the CNA for the five year term commencing on January 1, 2019 will occur in accordance with the schedule shown in the chart below; however, CNAC may change the activities and/or schedule at any time for any reason.

CNA RFP SCHEDULE			
#	Event/Activity	Start Date	End Date
1	CNAC issues RFP		05-Jan-18
2	Vendor review of RFP	05-Jan-18	09-Feb-18
3	Due Date for Receipt of Written Questions from Vendors		09-Feb-18
4	Due Date for Receipt of Vendor Letter of Intent to Respond		09-Feb-18
5	CNAC RFP Committee develops & sends responses to vendors	09-Feb-18	2 -Mar-18
6	Due Date for CNAC receipt of Vendor Proposals		23-Mar-18

7	CNAC RFP Committee reviews proposals & creates short list of prospective vendors	23-Mar-18	6-Apr-18
8	CNAC RFP Committee develops & sends list of questions to short list of vendors	6-Apr-18	20-Apr-18
9	Due Date for receipt of Short List Vendors' Responses to CNAC Questions		04-May-18
10	CNAC RFP Committee review of vendor responses to questions	04-May-18	11-May-18
11	CNAC RFP Committee preparation for vendor presentations	11-May 187	18-May-18
12	Vendor presentations to CNAC RFP Committee	22-May-18	25-May-18
13	CNAC RFP Committee review and assessment of vendor Proposals	28-May-18	22-Jun-18
14	CNAC RFP Committee recommendation of vendor to CNAC Board	25-Jun-18	29-Jun-18
15	CNAC Board Meeting to approve recommendations re: Vendor		29-Jun-18
16	Contract negotiations with selected vendor	3-Jul-18	3-Aug-18
17	CNAC Board Meeting to approve contract		17-Aug-18
18	Sign contract		31-Aug-18

6.0 ADDITIONAL CONTRACTUAL TERMS

This section provides a non-exhaustive list of contractual terms and conditions that CNAC will likely include in any contract entered into with a vendor. CNAC reserves the right to exclude any of the terms listed below and/or to include such other terms and conditions that are customary for transactions of a similar nature to that as described in this RFP. The following list is in addition to the terms and conditions specified in other parts of this RFP.

1. Governing Law

The contract shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada as applicable.

2. Indemnification

The contract shall provide for the vendor to indemnify CNAC and its officers, directors, and shareholders for damages due to the breach by the vendor of its agreement with CNAC and for damage, death, or personal injury due to the vendor's acts or omissions as CNA.

3. Trademarks and Publicity

The vendor in carrying out its duties as CNA shall have no rights to use any trademarks, trade names, business names, designs, logos, or other marks which the vendor does not own or for which the vendor is not an authorized licensee including, without limitation, those owned by CNAC, without prior written authorization.

4. Confidentiality

The contract shall include standard confidentiality provisions.

5. Termination

CNAC shall have the ability to terminate the contract, without liability, in the event that the vendor defaults in performing its obligations. The terms and conditions of termination would be specified in the contract.

6. Limitation of Liability

Unless specifically provided in the contract, CNAC and any of its directors, officers, employees, agents, contractors or shareholders shall have no liability whatsoever for any losses, damages or other injury incurred or suffered by the vendor.

7. Insurance

The contract shall obligate the vendor to maintain worker's compensation insurance, employer's liability insurance, comprehensive general liability insurance, and motor vehicle insurance of a minimum amount specified by CNAC.

8. Bond/Letter of Credit

The contract shall require that the vendor provide CNAC with a performance bond and/or letter of credit issued by a reputable Canadian bank in an amount of not less than \$1 million to support the Vendor's performance under the contract. The terms of the performance bond and/or letter of credit shall be to the satisfaction of CNAC.

9. Representations, Warranties and Covenants

The contract shall provide for standard representations, warranties and covenants of the vendor including, but not limited to, the following: authority to enter into the contract, corporate existence, and eligibility to enter a contract to perform the CNA services, system operation, and approvals.

10. Intellectual Property

The vendor shall provide an unlimited intellectual property representation, warranty and indemnity in favour of CNAC and that all intellectual property developed by the vendor or obtained by the vendor in fulfilling its duties as CNA shall be the property of CNAC both during and after the term of the contract and shall be required to be placed in escrow with CNAC's Corporate Secretary.

11. Ownership of Data

All data delivered to the vendor by TSPs under this agreement shall remain the property of the respective TSPs and, upon termination of the agreement for any reason, will be delivered by the vendor to CNAC in a medium acceptable to CNAC, and to be held in trust and in confidence for transfer to a new vendor selected to perform the CNA functions.

12. MFN

The contract shall provide provisions that grant CNAC most favored status with respect to the rates being charged for the services such that CNAC is entitled to rates that are no higher than rates charged by you to your other clients for similar services.

13. Dispute Resolution

The contract shall provide for a formal dispute resolution process utilizing binding third-party arbitration.

14. Time

Time shall be of the essence under the contract.

15. Assignment/Change of Control

The contract shall be assignable by the vendor only on the prior written consent of CNAC. The vendor must also provide notice to CNAC of any proposed change of control of the vendor, and CNAC shall have the right to accept or reject such change of control.

16. Force Majeure

The contract shall provide for a force majeure clause to deal with such events as acts of God, labour unrest and war.

17. Cooperation with New Vendor

The successful vendor will be required to cooperate with a successor vendor, if a different vendor were to win the next contract extension, or upon termination of the contract. The terms and conditions of succession will be specified in the contract with the vendor.

7.0 RFP PROCESS

7.1 Right to Amend or Revise RFP

CNAC reserves the right to add, delete and/or change the terms of this RFP and to issue corrections and amendments to this RFP at any time.

In addition to any rights identified elsewhere in this RFP, CNAC reserves the rights to:

- a) reject any and all proposals;
- b) add, delete and/or change the terms of this RFP at any time;
- c) accept or reject, in whole or in part, any proposal without giving any reason for the decision;
- d) have any documents submitted by a prospective vendor reviewed and evaluated in confidence by any party, including independent consultants;
- e) cancel the RFP process without penalty at any time for any reason;
- f) conduct negotiations with one or more vendors simultaneously;
- g) enter into a contractual arrangement with one or more vendor(s);
- h) award all or any portion of a proposal which is deemed most favourable to the interests of the Canadian telecommunications industry, as determined by CNAC; and
- i) change a deadline date or any dates set out herein.

7.2 Evaluation Process

CNAC may establish a CNAC selection board to conduct an evaluation of prospective vendor proposals and make recommendations to CNAC with respect to the selection of a vendor. If more than one vendor submits an acceptable proposal, CNAC may conduct negotiations with multiple vendors in order to select a final vendor with which to enter into a contract. The evaluation of proposals will be based upon a combination of the vendors' abilities to comply with the requirements contained in this RFP and the value proposition proposed by the vendor.

It is anticipated that the evaluation period will be as estimated in the schedule specified in section 5.0 of this RFP, however, the evaluation period may extend for such longer period as CNAC may advise prospective vendors. Prospective vendors may not amend their proposals during the evaluation period. A proposal may be withdrawn by a prospective vendor, at any time on notice to CNAC. Proposals that are withdrawn will no longer be considered by CNAC and may not be resubmitted in any form.

This RFP is not a request for tenders, and proposals submitted in response to this RFP are done on a voluntary basis and shall not constitute tenders. CNAC is not obligated to accept any proposal or to enter into negotiations for a contract with any person submitting a proposal. In any case, the lowest price quoted will not necessarily determine the proposal to be chosen.

7.3 Contractual Obligations

The costs of preparing and filing questions, responses to questions, and the proposal in response to this RFP, including the costs of meeting and liaising with CNAC and participating in evaluations of the proposal and any system components described in the proposal, shall be the sole responsibility of the prospective vendor.

No contractual or other obligations or liability are assumed by CNAC or any of its directors, officers, employees, agents, contractors and shareholders in issuing the RFP, responding to vendor questions, receiving, accepting, and evaluating proposals, and/or making a preliminary or final prospective vendor selection.

This RFP should not be construed in any manner to give a right to prospective vendors, for any claim whatsoever to CNAC for reimbursement of cost for any efforts expended by any person in preparation of a proposal.

7.4 Contract Negotiations

CNAC reserves the right to negotiate all terms and conditions in order to enter into a formal contract with the successful vendor. This RFP and the vendor's proposal may form part of the prime contract together with such terms and conditions as may be agreed to between CNAC and the vendor. CNAC intends to notify the CRTC prior to execution of the contract with the vendor. As CNAC operates under the delegated authority from the CRTC, the CRTC has final control and authority to make changes to this RFP and the contractual terms.

7.5 Publicity

No publicity or news releases pertaining to this RFP, a proposal submitted in response to this RFP, discussions of any kind regarding this RFP, or contract negotiations may be released by a prospective vendor or its subcontractors without the prior written approval of CNAC.

7.6 RFP Accuracy

This RFP may include unintended errors, omissions, and/or deficiencies. Therefore, the accuracy and completeness of this document and related documents are not guaranteed. In the event that such errors, omissions, and/or deficiencies are discovered by the prospective vendor, the prospective vendor shall notify CNAC in writing. CNAC will attempt to clarify any such errors, omissions, or deficiencies to all parties who have indicated an interest in responding to this RFP.

Each prospective vendor is expected to examine the specifications and instructions carefully. Calculation errors shall be the prospective vendor's risk. In the event of a prospective vendor's error in price, time or calculations, quoted items shall prevail without recourse or liability against CNAC. Prospective vendors shall indemnify and hold CNAC harmless from any claim, demands, or actions in the event of any such prospective vendor errors.

8.0 RESPONSE GUIDELINES

8.1 General Guidelines

All materials submitted to CNAC in respect of this RFP, including questions concerning this RFP and all proposals in response to this RFP:

- 1) shall be submitted to the following address (CNAC Address):
Mr. Douglas Birdwise
CNAC Business Manager
109 Westpark Drive
Ottawa, Ontario Canada K1B 3G4:
- 2) must be delivered to the specified address only, and must not be sent by facsimile or electronic means;
- 3) must be written in the English language;
- 4) Each vendor package must contain one paper copy of the PROPOSAL and one IBM-PC formatted DVD or CD OR USB Key containing the proposal as Microsoft Word or Excel documents; and
- 5) must be received by 12:00 noon (Eastern Standard Time) by the date specified in the Schedule set out in this RFP (subject to any amendments to this schedule by CNAC).

8.2 Notice of Intent to Respond

Prospective vendors are requested, but not required, to give notice of their intent to respond to this RFP to CNAC at the CNAC Address by the Due Date for Receipt of Vendor Letter of Intent to Respond as specified in the CNA RFP Schedule set out in this RFP (subject to any amendments to this schedule by CNAC). Only prospective vendors that have notified CNAC of their intent to respond to this RFP shall be entitled to receive any notices issued by CNAC concerning this RFP, including, but not limited to, any changes in the schedule.

8.3 Questions

All questions concerning this RFP shall be delivered by prospective vendors to the CNAC Address by the Due Date for Receipt of Written Questions from Vendors specified in the CNA RFP Schedule set out in this RFP (subject to any amendments to this schedule by CNAC). All such questions shall be submitted in a sealed envelope marked "CNA RFP Questions" with this RFP title and the prospective vendor's name.

Each vendor package should contain a cover letter that includes the name(s) and phone number(s) of the person(s) within the vendor's organization who should be contacted by CNAC in the event any questions arise during the preparation of responses to the "CNA RFP Questions". Only questions received by the Due Date will be responded to.

Each vendor package must contain one paper copy of the "CNA RFP Questions" and one IBM-PC formatted DVD or CD or USB Key containing the "CNA RFP Questions" as a Microsoft Word or Excel document..

All "CNA RFP Questions" shall be single-spaced, in Times New Roman font size 12, printed on one side only, on 8.5" x 11" 3-hole punched paper, identified by vendor name, and numbered in order as per the following example, e.g., XYZ-1, where XYZ is a short name or acronym of the vendor's organization name of ten characters or less in length, such as ABC for the ABC DEF Company. "CNA RFP Questions" shall be numbered commencing with number 1 and progress accordingly without interruption. "CNA RFP Questions" may have multiple parts which shall be numbered using the format 1.1, etc.

CNAC shall distribute all "CNA RFP Questions" submitted by prospective vendors and responses to all prospective vendors that have given notice to CNAC of their intent to respond to this RFP in accordance with the procedure set out in section 8.2. Telephone inquiries will not be permitted or accommodated. The CNAC responses to vendor questions will not identify the author of the questions.

8.4 Proposals

Proposals, complete in all respects, must be delivered to the CNAC Address by the Due Date and time for receipt of vendor proposals specified in section 5.0 of the RFP (subject to any amendments to this schedule by CNAC). All proposals shall be submitted in a sealed envelope marked "Proposal to Perform the Functions of the CNA" with this RFP title and the prospective vendor's name. Each "Proposal to Perform the Functions of the CNA" should contain a cover letter that includes the name(s) and phone number(s) of the person(s) within the prospective vendor's organization who should be contacted in the event any questions arise during the evaluation of the proposal. Failure to deliver a "Proposal to Perform the Functions of the CNA" to the CNAC Address by the applicable Due Date and time may, at the discretion of CNAC, result in the disqualification of the prospective vendor's "Proposal to Perform the Functions of the CNA".

8.4.1 Quantity of Copies and Format

Each prospective vendor package shall contain one paper "Master Copy" of "Proposal to Perform the Functions of the CNA" and two IBM-PC formatted diskettes or CDs containing the "Proposal to Perform the Function of the CNA" as a Microsoft Word or Excel document or a file that can be converted to one of those document types without loss of formatting. Please mark all pages of the one paper copy as the "Master Copy". If discrepancies occur between the "Master Copy" and the diskettes or CDs, the "Master Copy" will govern.

All proposals shall be typed, single-spaced, in Times New Roman font size 12, printed on one side only, on 8.5" x 11" 3-hole punched paper. Each section of the proposal shall begin on a new page and be tabbed separately.

Proposals must not exceed 100 pages in length, excluding financial reports.

8.4.2 Proposal Contents

General

Responses should be based upon the specifications provided in this RFP. Prospective vendors shall furnish all information as requested per the applicable instructions providing sufficient data to enable CNAC to evaluate the proposal. Any deviations to the RFP should be noted, and the prospective vendor shall indicate the reasons for non-compliance and provide an alternative solution, if available. Any prospective vendor who does not completely reply to the proposal as requested may be eliminated from consideration at the discretion of CNAC.

Proposals having minor exceptions and deviations shall be considered only if the following conditions are satisfied:

- a) all exceptions and deviations from the specifications are explicitly stated in the Proposal Summary; and
- b) all exceptions and deviations are appropriately justified on the basis of performance, schedule and/or relative price.

In each of the sections and subsections of the response to the RFP, the prospective vendor shall clearly state the roles and responsibilities of any and all subcontractors that are providing parts of the total solution under the direction of the prospective vendor.

The proposal shall consist of the separate sections as specified in the Annex A-Template for Responses.

8.5 Prospective Vendor Responses to CNAC Questions

CNAC may issue questions to the short list of prospective vendors. All responses to questions posed by CNAC shall be delivered to CNAC address by the Due Date specified in section 5.0 of this RFP for receipt of Short List Vendors' Responses to CNAC Questions. (The due date is subject to change by CNAC). All vendor packages containing responses to questions from CNAC shall be submitted in a sealed envelope marked "Responses to CNAC Questions" with this RFP title and the prospective vendor's name.

Each prospective vendor package should contain a cover letter which includes the name(s) and phone number(s) of the person(s) within the prospective vendor's organization who should be contacted by CNAC in the event any questions arise during the assessment of the "Responses to CNAC Questions". Failure to deliver any "Responses to CNAC Questions" to the address above by the Due Date for Short List Vendors' Responses to CNAC Questions may result in the disqualification of the "Responses to CNAC Questions".

Each prospective vendor package must contain one paper copy of Responses to CNAC Questions and one IBM-PC formatted DVD or CD or USB key containing the CNA RFP Questions as a Microsoft Word or Excel document.

All "Responses to CNAC Questions" shall be typed, single-spaced, in Times New Roman font size 12, printed on one side only, on 8.5" x 11" 3-hole punched paper, identified by prospective vendor name, and numbered in order as per the numbering scheme used by CNAC.

9.0 TELECOMMUNICATIONS INDUSTRY GUIDELINES

The following documents, which may be modified from time to time, contain the descriptions of the various functions to be performed by the CNA. The versions of these documents that are effective as of 5 September 2017 shall be the versions to be utilized by all prospective vendors for the purpose of submitting proposals under this RFP process (unless advised otherwise in writing by CNAC).

Prospective vendors shall be responsible for obtaining the versions of the following documents that are effective as of 5 September 2017.

- Canadian documents are available via the CRTC/CISC web site (<http://www.crtc.gc.ca/cisc/eng/cisf3f.htm>), or CNAC web site (<http://www.cnac.ca/>).
- Current versions of INC documents are available from the Alliance for Telecommunications Industry Solutions ("ATIS") web site (<http://www.atis.org/>)
- ANSI documents may be obtained from the American National Standards Institute ("ANSI") which has an Internet web site at www.web.ansi.org.
(All ANSI documents are copyrighted and are available from the ATIS store).

The CNA shall perform its functions in accordance with guidelines approved by the CRTC. Most of the guidelines are maintained on the CRTC CISC CSCN Web Site at: <http://www.crtc.gc.ca/cisc/eng/cisf3fg.htm>. The Guidelines currently include but are not limited to:

1. CRTC Interconnection Steering Committee Administrative Guidelines
2. CSCN Adjunct to the CRTC Industry Steering Committee Administrative Guidelines
3. Canadian Numbering Plan & Dialing Plan
4. Canadian Central Office Code (NXX) Assignment Guidelines
5. Canadian Emergency Service Routing Digit (ESRD) Block Assignment Guideline
6. Canadian International Mobile Station Identity (IMSI) Assignment Guidelines
7. Canadian MIN Block Identifier (MBI) Assignment Guideline
8. Canadian Non-Geographic Code Assignment Guideline
9. Canadian NPA Relief Planning Guidelines
10. Canadian NPA 600 NXX Code Assignment Guideline
11. Canadian Number Resource Utilization Forecast (C-NRUF) Guidelines
12. Canadian System Identifier (SID) Assignment Guideline
13. Canadian Adjunct International Inbound NPA (INT/NPA/NXX) Assignment Guidelines
14. Canadian Adjunct Personal Communications Services N00 NXX Code Assignment Guidelines

15. Canadian Adjunct to the INC Carrier Identification Code (CIC) Assignment Guidelines
16. Canadian Adjunct to the INC 900 NXX Code Assignment Guidelines
17. Canadian Adjunct to INC NPA Allocation Plan and Assignment Guidelines
18. INC 555 NXX Assignment Guidelines
19. INC 800-855 Number Assignment Guidelines
20. INC Vertical Service Code Assignment Guidelines
21. Canadian N11 Notification & Implementation Guideline
22. INC 555 NXX Assignment Guidelines
23. INC 800-855 Number Assignment Guidelines
24. INC Vertical Service Code Assignment Guidelines
25. ANSI T1.11a - 1994 American National Standards Institute (ANSI)
"Telecommunications - Signaling System Number 7 - Message Transfer Part (MTP)
(Numbering of Signaling Point Codes)"
26. ANSI T1.111 - 1996 American National Standards Institute (ANSI)
"Telecommunications - Signaling System Number 7 - Functional Description of the
Signaling System Message Transfer Part (MTP)"

10.0 ESTIMATED CNA WORK VOLUMES

The following charts contain estimates of certain, but not all, activities related to the functions to be performed by the CNA. Its purpose is to provide guidance to assist prospective vendors in responding to the requirements contained in this RFP. Actual quantities may and likely will be different than as estimated below.

Projected Volume of Work

(1 January 2019 – 31 December 2023)

<i>FUNCTION</i>	<i>Year 1</i>	<i>Year 2</i>	<i>Year 3</i>	<i>Year 4</i>	<i>Year 5</i>
	<i>Jan 1 – Dec 31, 2019</i>	<i>Jan 1 – Dec 31, 2020</i>	<i>Jan 1 – Dec 31, 2021</i>	<i>Jan 1 – Dec 31, 2022</i>	<i>Jan 1 – Dec 31, 2023</i>
CSCN SECRETARY					
Number of CSCN face to face meeting days & minutes	6	6	6	6	6
Number of CSCN conference calls & minutes (excluding agenda setting conference calls)	24	24	24	24	24
Number of CSCN agenda setting conference calls (normally less than 30 minutes each)	3	3	3	3	3
CO CODE ADMINISTRATION					
Number of requests for New CO Codes based on	1525	1590	1534	975	870

draft 2017 G-NRUF results (actuals typically are 70% to 80% of these quantities)					
Number of requests to change existing CO Code data - Part 1 Form BASIC Data Updates – Basic	138	138	138	138	138
Number of requests to change existing CO Code data - Part 1 Form BULK A Data Updates	104	104	104	104	104
Number of requests to change existing CO Code data - Part 1 Form BULK B Data Updates	60	60	60	60	60
Number of CO Codes returned voluntarily by Code or reclaimed by CNA	44	44	44	44	44
Requests for Non-Geographic Codes	31	31	31	31	31
Reclaimed Non-Geographic Codes	1	1	1	1	1
<i>MBI</i>					
Number of requests for New MBI Codes/Blocks	292	292	292	292	292
Number of requests to change existing MBI Code data - Part 1 Form	86	86	86	86	86
Number of MBI Codes reclaimed by CNA from Code	161	161	161	161	161
<i>G-NRUF</i>					
Number of General NRUF	1	1	1	1	1

ADMINISTRATION RE: NANPA ADMINISTERED RESOURCES

Number of NPA 456 NXX Code requests received, validated & forwarded to NANPA	0	0	0	0	0
Number of PCS/N00 NXX NPA Code requests received, validated & forwarded to NANPA	0	0	0	0	0
Number of NPA 900 NXX Code requests received, validated & forwarded to NANPA	2	2	2	2	2
Number of NPA 800 855-XXXX Line Number requests received, validated & forwarded to NANPA	0	0	0	0	0
Number of 555-XXXX Line Number requests received, validated & forwarded to NANPA	0	0	0	0	0
Number of CIC Code requests received, validated & forwarded to NANPA for assignment, amendment or Reclamation	10	10	10	10	10

ADMINISTRATION RE: CANADIAN NUMBERING RESOURCES					
Number of SS7 Network Code requests received, validated & forwarded to Telcordia TRA	7	7	7	7	7
Number of NPA 600 NXX Code requests received, validated & processed	0	0	0	0	0
Number of ESRD Block Code requests received, validated & processed	190	190	190	190	190
Number of IMSI Code requests received, validated & processed	5	5	5	5	5
Number of SID Code requests received, validated & processed	1	1	1	1	1
Number of INC Meeting Reports submitted to CSCN	6	6	6	6	6

The volumes listed above are those that are forecast but not guaranteed during the years 2019 - 2023, based on the most recent three year average, or historical activity since the creation of the CNA, or the 2017 G-NRUF results. Historical data is contained in the CNA Annual Reports that are available on the CNA web site at www.cnac.ca.

CSCN Secretary Function

The CSCN Secretary work volumes are based on a projection that there will be 3 CSCN face-to-face meetings per year with each meeting lasting 1 to 3 days, thus requiring about 6 meeting days per year. It is expected, but not guaranteed, that the meetings will be held in either Toronto, Montreal, or Ottawa, based on most recent practice; however, meetings could be located anywhere in Canada. Thus it is projected that there will be 3 CSCN Agenda Setting conference calls per year lasting from 30 minutes to one hour in length. The number of CSCN conference calls is projected to be about 24 calls per year lasting from one hour to three hours in length.

CO Code Administration Function

The number of requests for New CO Codes is based on the 2017 G-NRUF. The Basic, Bulk A and Bulk B Updates are based on the average of the quantity of codes updated for each of the last 3 years.

New Code requests means a Part 1 Form requests for initial codes, growth codes and reserved codes.

Part 1 Form BASIC Data Updates means any change to the data fields on the ACD screen for less than ten CO codes (excludes recovered codes). See definitions for Bulk A and B updates for processing more than 10 codes at one time.

Part 1 Form BULK A Data Updates means updates for 10 or more CO Codes that require identical changes to one or two data elements on the Assigned Code Record (ACD) screen and which do not require any error checking to be done by the CNA. For example, a request to change the OCN for a group of NXXs to another OCN (excludes recovered codes)

Part 1 Form BULK B Data Updates means updates for 10 or more CO Codes that require three or more changes to the same data elements, or identical changes to three or more data elements, or different changes to three or more data elements on the ACD screen, all of which require error checking to be done by the CNA. Example would be where an ILEC changes a number of rate centres to a new tariff, or where a company does a number of switch updates, or where an ILEC consolidates ten or more CO codes that were previously in different exchange areas into a single consolidated new exchange area, thus requiring a change to the rate centre; e.g., where a company moves ten or more CO codes from one switch or switches to another switch or switches (excludes recovered codes)).

CO Code Holders may voluntarily return CO Codes to the CNA using a Part 1 Form, in which case the CNA work required is expected to be higher than that for a new code request. However, the CNA may initiate reclamation of CO Codes from Code Holders in accordance with the Guidelines (including recovery of “Stranded” CO Codes from failing service providers), in which case the CNA work may be more than a voluntarily returned code. It is expected that the level of effort associated with a CNA initiated reclamation will be higher than that associated with voluntary returns as CNA initiated reclamations will generally require dealing with non-telecom related people (e.g. bankruptcy trustees).

MBI Codes

The quantities of MBI code requests, change requests and reclamations projected for each year are based on the average of the quantity of codes requested, changed and reclaimed for each of the last 3 years.

G-NRUF

There is one G-NRUF conducted annually in accordance with the NRUF Guideline. Additional NRUFs may be required for relief planning, jeopardy conditions, and special purposes as may be determined by the CRTC.

Administration of NANPA Administered Resources

The quantities projected for NANPA administered resources are based upon past historical work activities and generally are an average of the past work volumes adjusted to remove any significant non-recurring events, such as the first establishment of the resource or a regulatory ruling.

Administration of Canadian Numbering Resources

The quantities projected for administration of Canadian numbering resources are based upon past historical work activities and generally are an average of the past work volumes adjusted to remove any significant non-recurring events, such as the first establishment of the resource or a regulatory ruling.

NPA Relief Planning

The NPA Relief Planning function can be viewed as consisting of four distinct phases of work activity. The four phases are described in the Canadian NPA Relief Planning Guideline and specifically identified in Appendix B of that Guideline. The four phases are:

- 1) R-NRUF and IPD Phase – The Canadian Numbering Administration (CNA) conducts the initial Relief Planning Numbering Resource Utilization Forecast (R-NRUF) and develops the Initial Planning Document (IPD) (Appendix B lines 1 to 4)
- 2) PD & CRTC Decision Phase – The Relief Planning Committee (RPC) develops the Planning Document (PD) and submits it to the CRTC for approval (i.e., Relief Method & Date), and the CRTC issues a Decision (Appendix B lines 5 to 14)
- 3) RIP & CRTC Approval Phase – The Relief Planning Committee (RPC) develops the Relief Implementation Plan (RIP) and submits it to the CRTC for approval (i.e., detailed industry plan and schedule including Consumer Awareness and Network Implementation Plans) (Appendix B lines 15 to 20)
- 4) Relief Implementation Phase – The Relief Planning Committee (RPC), Telecommunications Service Providers (TSPs) and users implement relief in accordance with the Relief Implementation Plan (Appendix B lines 21 to 26)

The CNA is to be compensated for relief planning work based on the quantity of NPA relief projects and the phases of work completed during the term of the contractual agreement. The table below provides a summary of the NPAs forecast to be in relief planning based on the 2017 G-NRUF results provided by the CNA. This Table was extracted from the CNA's 2017 NRUF Results that were provided to the CSCN.

The CNA's Projected Exhaust Dates (PEDs) for all Canadian geographic NPAs are shown in the chart below. Several NPAs are projected to exhaust more than once in the 20 year forecast period used by the CNA.

NPA	Exhaust 2017 G-NRUF	Remarks
204-431	3Q 2023	
226-548-519	4Q 2026	
236-250-604-778	2Q 2020	Relief Planning has Started in accordance with Telecom Notice of Consultation CRTC 2016-208.
	2Q 2029	
	2Q 2038	
249-705	3Q 2024	
289-365-905	3Q 2023	
289-365-905	3Q 2033	
306-639	3Q 2022	
	4Q 2034	
343-613	2Q 2025	
403-587-780-825	1Q 2022	
	3Q 2029	
	3Q 2037	
416-437-647	2Q 2030	
418-581	3Q 2020	Relief Date November 24, 2018 in accordance with Telecom Decision CRTC 2017-32.
	4Q 2031	
438-514	3Q 2028	
450-579	2Q 2022	
	4Q 2036	
506	4Q 2021	Relief Planning has Started in accordance with Telecom Notice of Consultation CRTC 2016-206.
709	3Q 2019	Relief Date November 24, 2018 in accordance with Telecom Decision CRTC 2017-35.
782-902	4Q 2029	
807	Beyond 2039	
819-873	3Q 2023	
	1Q 2037	
867	3Q 2036	

Any NPA that is declared to be in a Jeopardy Condition as defined in the Guidelines is subject to special relief planning provisions and price negotiations to reflect the additional or modified duties to be performed (e.g., J-NRUFs, implementation of Jeopardy Contingency Plans).

11.0 SUGGESTED PERFORMANCE REVIEW PROCESS AND STANDARDS

The services to be provided by the selected vendor to CNAC and the services users are to be performed in accordance with the following standards. The list below is in addition to such other standards and/or guidelines to be set out in the body of the agreement, the documents, applicable law, telecommunications industry guidelines, CSCN Administrative Guidelines and such other recognized industry and regulatory standards and/or guidelines as may be established from time to time during the term of the agreement to be entered into with the vendor selected to be the CNA.

A. Performance Standards

The selected vendor will meet or exceed each of the following standards in the performance of the services hereunder:

CSCN Secretary

- a) attend, chair, record attendance and take minutes of all CSCN meetings and conference calls (excluding all CSCN working group meetings except for those where the CNA has been requested to attend);
- b) post, within ten business days, minutes of CSCN meetings prepared by the selected vendor on the CNA web site;
- c) distribute, within ten business days of each meeting, a copy of CSCN minutes (including attachments) prepared by the selected vendor to those parties who attended the meeting as well as such other parties who are listed on the CSCN distribution list;
- d) maintain a CSCN master distribution list; and
- e) update, within one business day of receipt of requested changes, the CSCN master distribution list (e-mail address list and business card data list) to be maintained on the CNA web site, and advise, on at least a weekly basis as necessary, all CSCN participants of such updates via e-mail.

Administration of North American Numbering Plan Resources

- a) receive, validate and forward to NANPA, within one business day of receipt, applications submitted to the selected vendor for numbering resources administered by the NANPA, with a letter to NANPA, recommending the assignment of the requested numbering resource, where appropriate;
- b) provide training on the CNA role in NANPA administered resources for CNA personnel;
- c) provide, three months in advance, notification of a relief planning meeting to all affected parties including CSCN participants;

- d) provide, at least 18 months prior to the NPA relief date, notification to the NANPA of the approved relief plan;
- e) complete, within a minimum of one business day and a maximum of ten business days, modification of any procedures or activities identified as requiring corrective or preventative action;
- f) maintain and update records for N11 Service Codes;
- g) manage, conduct, and coordinate the C-NRUF and submit the C-NRUF Results to the NANPA by NANPA's due dates; and
- h) develop and submit a C-NRUF report summarizing the C-NRUF results to the CSCN distribution list within 30 business days of submission of C-NRUF Results to the NANPA.

Central Office Code Administration

- a) assign CO Codes to Service Users within the minimum time specified in the Canadian Central Office Code ("NXX") Assignment Guidelines;
- b) conduct tests of disaster recovery plan every six months;
- c) input CO Code data into the Telcordia TRA database system (i.e., ACD screen data) coincident with the assignment of each CO Code; and
- d) update the CO Code in the Telcordia TRA database system (i.e., ACD screen data) within five business days from receipt of such changes from the CO Code Holder.

Canadian Number Resource Administrations

- a) receive, validate and forward to Telcordia TRA, within one business day of receipt, applications for assignment of SS7 Network Codes from Canadian entities and maintain the associated records;
- b) receive, validate and process, within ten business days of receipt, requests for NPA 600 NXX Codes and maintain the associated records;
- c) receive, validate and process, within 14 calendar days of receipt, requests for Canadian Non-Geographic NPA NXX Codes and maintain the associated records;
- d) prepare and publish annually, on June 30 each year (or such other date determined by CNAC), a CNA Annual Report on the status of Canadian numbering resources (similar to the NANPA Annual Report);
- e) provide reports, on the due dates requested by the CSCN, on various numbering topics upon request; and
- f) receive, validate and forward, within ten business days of receipt, applications for National Business Group Identifiers ("NBGIs") from Canadian entities to Telcordia TRA for assignment.

General

- a) acknowledge receipt, within one business day of message reception, of information requests received via e-mail, voice mail or the CNA web site;
- b) provide, within five business days of message reception, the information requested via e-mail, voice mail or the CNA web site;

- c) liaise with the CSCN on a monthly basis to determine new performance standards and/or guidelines, if any;
- d) update the CNA web site on a daily basis to ensure that it contains accurate and up-to-date information;
- e) make updates to all CSCN logs within five business days of any changes;
- f) document, address and attempt to resolve, within ten (10) Business Days of receipt, any performance problem raised by an industry participant Service User, CSCN or CNAC;
- g) submit, within ten business days of identification of a performance problem, either on its own volition or on notice of the same provided verbally or in writing by any third party, including Service Users and CNAC, a report to CNAC summarizing the results of the selected vendor's investigation of the performance problem and any corrective action taken or to be taken by the selected vendor;
- h) maintain an office in Canada staffed by not less than one qualified person at all times between the hours of 8:00 a.m. to 5:00 p.m. (EST) from Monday to Friday (excepting the nine statutory holidays: New Year's day, Good Friday, Victoria Day, Canada Day, Ontario Civic holiday (first Monday in August), Labour Day, Thanksgiving, Christmas and Boxing Day);
- i) respond to requests for information from CNAC and/or the billing and collecting agent related to TSPs and services received from the CNA;
- j) carry out request from CNAC to suspend service to and reclaim services provided to TSPs; and
- k) have at least one qualified staff member accessible by pager and/or cellular phone outside normal business hours, on a 24 hours per day, seven days per week basis.

B. Performance Review Process

1. *Personnel*

The selected vendor shall employ and/or utilize such number of persons qualified by education and industry experience to perform the services hereunder in the following capacities:

- a) Program Manager;
- b) Central Office Code Program Manager;
- c) CO Code Specialists;
- d) Office Administrator;
- e) Technical Support Staff;
- f) CNAS and computer software Specialists; and
- g) NPA Relief Planning Manager.

2. *Performance Monitoring Reports*

The selected vendor shall provide Monthly Work Volume Reports, in a format to be determined by the CNAC, acting reasonably, to the CNAC which shall provide a summary of the quantities of the various numbering resources assigned and other tasks performed by the CNA. In order to provide the data for this Monthly Work Volume Report, the selected vendor shall track all relevant work performed and dates (i.e., receipt of applications by resource type, requests for

information, industry notification requests), as well as the response dates (i.e., acknowledgment of receipt, action taken, data base updates, the CNA web site updates, due dates met and missed, etc.).

The CNA shall also create and publish an Annual Report that shall include comparative summary information on a monthly and annual basis, as appropriate, for all key performance measures including work volumes. The Annual Report shall contain statistics including: quantity of applications received and processed by type of numbering resource; average time to process an application, including minimum and maximum time encountered; quantity of applications denied and reason(s); quantity of hard copy documents distributed; quantity of CNA web site accesses; quantity of CNA web site updates; quantity of inquiries for service information received, and quantity of complaints or concerns received. The Annual Report shall also identify any process improvement opportunities.

The vendor shall meet with CNAC at least quarterly during each year of the term of the agreement to, among other things: (1) discuss operations under the agreement and provide detailed information regarding the performance of the vendor; and (2) discuss and exchange information about, and assess performance of the systems used to carry out the vendor's responsibilities and proposed regulatory changes, customer service matters and recommend improvements thereto. In order to facilitate the periodic reviews, a management committee consisting of a representative from the vendor and a representative from CNAC shall be established and shall be responsible for completing such periodic reviews. The management committee will also be responsible for managing the day-to-day relationship between the parties.

3. *Performance Monitoring System*

- a) The selected vendor shall establish a performance monitoring system for the CNA responsibilities which conforms to the ISO 9001 standard and which shall have procedures for:
 - i) verifying the quality of products and services delivered;
 - ii) identifying any product or service which fails to meet stated specifications ("a non-conformity");
 - iii) ensuring appropriate action is taken to prevent recurring non-conformity; and
 - iv) ensuring that this action is effective and timely.
- b) The selected vendor's quality program shall include procedures for:
 - (i) regularly (but not less than once per year) seeking client feedback on the quality of goods and services which are provided; and
 - (ii) auditing its performance, or any aspect of that performance, in response to a request by CNAC.
- c) The selected vendor's internal quality program shall conduct an internal audit of its performance of its CNA responsibilities on a scheduled semi-annual basis. In addition, the selected vendor shall conduct an internal audit of its CNA responsibilities on request of CNAC. The following types of audits may be undertaken:

- (i) external audits - audits of the selected vendor's procedures as the CNA conducted by CNAC or its agent; and
 - (ii) independent audits - conducted by a third party. These audits would normally be conducted by the ISO registrar to maintain ISO certification.
- (d) The selected vendor shall implement the following performance monitoring mechanisms and problem management system in connection with it acting as the CNA:

(i) Staff Meetings

The selected vendor shall conduct regular staff meetings to analyze and critique its CNA procedures and results.

(ii) Input From Affected Parties

The selected vendor should anticipate direct input from the CSCN, CNAC and CNA Service Users regarding its performance as the CNA. Input may also be derived from the selected vendor's staff observations or from comments from the Canadian industry or Service Users, regarding the selected vendor's performance as the CNA. The selected vendor will seek, on an annual basis, similar input from the NANPA regarding those aspects of the CNA's responsibilities that require cooperation and coordination with that organization. This input should be used by the CNA to identify performance problems and improve CNA performance.

(iii) Industry Questionnaire

The selected vendor acknowledges that CNAC may distribute a CNA performance questionnaire to the Canadian industry on an annual basis. Upon request, the selected vendor shall prepare a draft questionnaire for the consideration and use by CNAC. At the discretion of CNAC, the selected vendor shall consolidate the questionnaire responses into a report to the CNAC.

4. Performance Audits

The selected vendor shall actively cooperate with and participate in performance audits, from time to time, deemed appropriate by those entities authorized to audit the CNA (i.e., CNAC, CSCN, CRTC). Deficiencies identified during an audit shall be corrected within the time directed by the auditing authority or, absent such a required time period, within a reasonable time to be agreed amongst the affected parties.

5. Corrective Actions

Failure by the selected vendor, at any time, to strictly adhere to the above standards, other standards as contained in the agreement, documents, telecommunications industry guidelines and other recognized industry and regulatory standards in the performance of its duties and obligations hereunder, shall entitle CNAC, prior to enforcing any of its rights under the

agreement to be entered into, to request the selected vendor to take such corrective action within the time specified by CNAC, to ensure strict compliance by the selected vendor with such standards. Failure to take such necessary corrective actions in the time specified by CNAC may result in termination proceedings being commenced by CNAC.

Annex A - Template for Responses

1. Cover Page

The cover page should include the name of the prospective vendor's organization; its contact's name, address, telephone number, email address and facsimile number; the date; and the signature of a duly authorized representative.

2. Proposal Summary & Deviations

This section shall contain two subsections as follows:

a) Proposal Summary

This subsection shall, in five pages or less, summarize all key features of the proposal including the use of subcontractors, if any.

b) Deviations & Exceptions (if any)

This subsection shall identify any and all deviations in the prospective vendor's proposal from the requirements identified in this RFP including a brief justification for each. A more detailed justification may be included in the section of the proposal that covers the subject. Other than the deviations identified in this subsection, the prospective vendor shall state in this subsection that the prospective vendor and any subcontractors shall comply with all of the other provisions of the RFP. The prospective vendor, by stating compliance to a requirement in this RFP, agrees that the prospective vendor has read and understood the requirement and that compliance is complete and deliverable at no additional cost unless otherwise noted.

3. Functional Requirements

This section should contain detailed information about how the prospective vendor proposes to fulfill the functional requirements of this RFP including confirmation of the prospective vendor's and subcontractors' abilities to perform each of the functional requirements. The section shall be divided into subsections as follows:

- a) CSCN Secretary;
- b) CNA Role in NANPA Administered Resources;
- c) Central Office Code Administration;
- d) NPA Relief Planning;
- e) C-NRUF;
- f) Administration of Canadian Numbering Resources;
- g) Proposed Performance Standards and Performance Monitoring Mechanisms;
- h) Proposed Problem Management System;
- i) Participation in CISC CSCN Dispute Resolution Process;
- j) Proposed Industry Notification Service;

- k) Proposed Organization Structure (i.e., organization chart showing positions and quantity of staff, brief job descriptions, proposed locations of offices, and staff resumes, if available);
- l) Proposed Hours of Operation;
- m) Proposed Telecommunications and Systems including prospective vendor intent, if any, to use CNAS Software;
- n) Proposed Security System;
- o) Proposed Disaster Recovery Plan;
- p) Proposed CNA Internet web site; and
- q) Proposed Preparation Period, Transition Plan & Implementation Schedule.

4. Prospective Vendor's Qualifications

a) Description of the Prospective Vendor's Business

This section shall contain a concise description of the principal business of the prospective vendor and any subcontractors, including such items as company background, characteristics of business strength and the products and services offered.

b) Financial Information

This section shall include a concise description of the financial condition of the prospective vendor and any subcontractors. Responses should include the most recent annual report and audited financial statements (e.g., income statement, balance sheet), if available, of the prospective vendor and any subcontractors. This section shall include information by which to assess the prospective vendor's financial strength. The most recent annual report and audited financial statements may be provided in a separate printed document or Adobe Acrobat format and do not count in the 100 page size limit for proposals.

c) Relevant Experience

This section shall describe the prospective vendor's telecommunications and number administration skills, experience and knowledge, as well as its capability to develop, operate and maintain database management and computer systems.

d) List of Company Officers (as appropriate)

This section shall include a list of the prospective vendor's company officers and their titles and responsibilities.

e) Bondable

This section shall include evidence that the prospective vendor is bondable. The term "bondable" is meant to refer to a form of performance bond, or other appropriate security, which could be obtained by the vendor to protect against the vendor's inability or refusal

to perform its obligations under the contract to be entered into with CNAC. The details of the contract performance security required by CNAC (including the circumstances in which such security may be drawn upon) will be negotiated with the vendor.

f) Eligibility To Submit Proposals

This section shall include prospective vendor and subcontractor certification that the prospective vendor and all subcontractors meet the eligibility criteria specified in Section 4.1 Eligibility To Submit Proposals (i.e., "neutral Canadian non-governmental entity").

g) Neutrality

This section shall include prospective vendor and subcontractor information and procedural practices as requested in Section 4.3 Neutrality.

h) Legal Proceedings

The prospective vendor shall identify any current or threatened litigation or other proceeding, including bankruptcy and related matters, in any judicial court or administrative agency in any jurisdiction, as well as any matter currently in, or expected to be in, arbitration, mediation or other form of dispute resolution, the resolution of which could materially affect the prospective vendor's and/or subcontractor's financial strength or ability to perform its duties as the CNA, in which the prospective vendor and/or subcontractor is presently involved or which they reasonably anticipate being involved in, and shall provide a summary description of the liabilities the prospective vendor anticipates may occur as a result of such proceedings.

i) Corporate References

The prospective vendor shall furnish references for itself and for any subcontractors, preferably for similar work being performed currently or in the recent past, including the name of the company, contact name, address and telephone number.

j) Prospective Vendor Compliance with Governmental and Regulatory Directives

The prospective vendor must certify that it will comply with the decisions, rules, policies and regulations of the CRTC as well as any Government of Canada policy directives or other regulations affecting the duties of the CNA.

k) Prospective Vendor Comments on Additional Contractual Terms

Each prospective vendor should indicate in its response to this RFP any comments or objections which the prospective vendor would have to the foregoing conditions, the reasons for such objections, the alternative provisions which the prospective vendor would suggest, and the reasons why the alternative provisions would be appropriate under the circumstances.

5. Pricing

This section shall specify the prospective vendor's proposed price quote to perform the functions of the CNA as described in this RFP. Prices shall be quoted in Canadian dollars exclusive of the Goods and Services Tax ("GST") and Provincial Sales Tax ("PST"). All pricing information shall be contained in this section of the proposal.

This section should address prices for all requirements set forth in this RFP as well as any other items pertinent to the prospective vendor's proposal. Pricing shall be firm and based upon an Engineered, Furnished and Installed ("EF&I") basis for all applicable goods, software, and services of the most recent vintage and/or technology available in the telecommunications industry.

"Engineered, Furnished and Installed" means that the provision of all applicable goods, software, and services will be provided to CNAC by the vendor at a price which includes, but is not limited to, any required design, construction, operation, supply, provision, and installation work.

The response, including prices, to the RFP shall be valid until December 31, 2018. As specified in the CNA RFP, proposals, once submitted, may not be amended but may be withdrawn at any time upon notice to CNAC.

The prospective vendor shall guarantee in its proposal that the prices for the services rendered shall be at least as low as those charged to the prospective vendor's most favoured customer for like quantities of the same or substantially similar services (i.e., preferred customer pricing). The prospective vendor shall guarantee that if the prospective vendor's prices (including the prospective vendor's prices for similar services for sale to any other customers) decrease during the term of any contract entered into with CNAC, CNAC shall receive preferred customer pricing in accordance with the intent of the above statement from the date the price decrease becomes effective.

The price quotes should be based upon the volumes of work contained in section 10.0. of this RFP and be inclusive of all actual work volumes that may occur over the term of the agreement. Should the vendor desire to propose prices for volumes of work that vary from those identified in this RFP, it may do so including identifying the minimum quantities of work that will be done for a fixed price plus prices for volumes of work done above the volumes covered by the fixed price quote.

Payments by CNAC to the selected vendor shall generally be made on a monthly basis on the last day of each month, in arrears, and calculated by dividing the Total Price for each applicable year by 12. Such monthly payments shall commence on January 31, 2019 and end on December 31, 2023.