

**Governance of Master Data – Structured and Unstructured****INTRODUCTION AND INSTRUCTIONS**

The Institute of Internal Auditors Research Foundation (IIARF) is the global leader in providing research and knowledge resources to enhance the internal audit profession.

The IIARF continually monitors the needs of the internal audit profession and its stakeholders to identify high priority topics for future projects. These high priority topics can either become Research Projects or Educational Products

**Research Projects** focus on discovering new information about the internal audit profession using academic research methods such as surveys, focus groups, interviews, case studies, literature review, and data analysis. Whenever possible, research projects should include implications or applications for practitioners.

**Educational Products** are designed to provide information that internal audit practitioners can use on the job. Educational products often include “how-to” information, tools, best practices, and so on. (A research component can support the educational product.)

The following request for proposal is for a **research project**, and a global scope is encouraged. Please note that submission guidelines were updated in 2012. Any proposal that does not follow the updated guidelines will be returned for revisions.

The review process normally lasts 4–6 weeks, but may take longer.

Return your proposal as a Microsoft Word document or PDF via email to [research@theiia.org](mailto:research@theiia.org).

**ALL RESPONSES TO THIS REQUEST FOR PROPOSAL  
ARE DUE NO LATER THAN MARCH 11, 2013.**

If additional information is needed, please contact The IIA Research Foundation:

Tel: +1-407-937-1356

Email: [research@theiia.org](mailto:research@theiia.org)

Thank you for your interest in The Institute of Internal Auditors Research Foundation. We look forward to working with you.

**TOPIC INFORMATION**

<b>Priority Topic Title</b>	<b>Governance of Master Data—Structured and Unstructured</b>
<b>Topic Summary</b>	Governing the creation, management, storage, and disposal of electronic data (including the technology and tools to accomplish this).
<b>Product Type</b>	Choose one: <input type="checkbox"/> Educational Product <input checked="" type="checkbox"/> Research Report (applied) <input type="checkbox"/> Research Report (add to knowledge base, theoretical)
<b>Target Audience</b>	The content would apply to any internal audit practitioner, especially information technology auditors (or technical auditors) and chief audit executives (CAEs).  The academic community could use the report as a teaching tool.
<b>Problem the Research Will Address</b>	Organizations need to have relevant and complete data that they can rely upon. Internal audit plays a key role in the governance of master data and the structured and unstructured processes that are associated with the data. Internal audit’s role is to review, assess, and confirm controls and data accuracy.  <i>This research should provide guidance on improved data control and environmental management for internal auditors and management. The scope should include both structured and unstructured data processes.</i>  (Structured data means information that is organized in fixed fields within a record or file. Examples include relational databases, spreadsheets, and XML files because the data is tagged and identified.)  (Unstructured data represents data that is free text and is not pre-defined or fixed. Basically any data not in a database or spreadsheet. Examples include email messages, audio or video data, or tweets.)
<b>Research Questions</b>	<ul style="list-style-type: none"> <li>• What are the most up-to-date assurance practices for <i>structured</i> data processes?</li> <li>• What are the most up-to-date assurance practices for <i>unstructured</i> data processes?</li> <li>• How can internal audit provide the most value to management and the board of directors in governing structured and unstructured master data?</li> </ul>
<b>Benefits to the Audience</b>	An organization that is knowledgeable about its data puts itself in a position to maximize the value of its data collections through

	<p>continued use.</p> <p>Broadly speaking, this research is expected to bring three major benefits to the audience’s organizations: (1) realizing the value of data through improved access and reuse; (2) ability to manage risks associated with data loss and irretrievability; (3) prioritization of resources, which leads to efficiency savings.</p>
<p><b>Topics/Issues</b> Proposals should include: [ ] All of the topics listed. OR [ X ] The researcher’s selection of options and/or additional topics.</p>	<ol style="list-style-type: none"> <li>1. Governing master data: <ul style="list-style-type: none"> <li>• For this research master data means information that represents the most important or key data for a business or organization. This especially is true when dealing with multiple applications or systems that may have multiple customer data sets. Master data should be the persistent, agreed-upon definition and single source of accurate and complete information.</li> </ul> </li> <li>2. Data governance: <ul style="list-style-type: none"> <li>• What is the impact on the organization? (i.e., security profiles, roles and responsibilities, organization placement, auditing the data management process and areas for standardization, etc.).</li> </ul> </li> <li>3. Data control: <ul style="list-style-type: none"> <li>• What unstructured data query tools are available and how effective are they in assessing controls?</li> </ul> </li> <li>4. Data access/environmental access: <ul style="list-style-type: none"> <li>• What is the best practice for data access controls and environmental access controls?</li> <li>• What is the best practice for high-risk user controls and authentication and grouping structures of data?</li> </ul> </li> <li>5. Data structure: <ul style="list-style-type: none"> <li>• What is special about data and database environments? (i.e., components, platforms, architectures, basic risks and exposures).</li> </ul> </li> <li>6. Data creation/generation process: <ul style="list-style-type: none"> <li>• How could we determine whether data creation is inaccurate or incomplete?</li> </ul> </li> <li>7. Risk management: <ul style="list-style-type: none"> <li>• Disaster recovery.</li> </ul> </li> <li>8. Metadata: <ul style="list-style-type: none"> <li>• Metadata is information about data. For example, metadata about names will state that the first field is the first name, the second field is the last name, the third field is the middle name, and so forth.</li> </ul> </li> <li>9. Big data: <ul style="list-style-type: none"> <li>• What is big data and what are best practices addressing big data? (Big data refers to vast amounts of data captured by many organizations. This represents exabytes of data 10<sup>18</sup>.)</li> </ul> </li> </ol>

	<p>10. Data classification (confidential, public, etc., and how they are handled differently).</p> <p>11. PII (Personally Identifiable Information).</p> <p>12. Use of data by business:</p> <ul style="list-style-type: none"> <li>• What is the best practice for location, condition, and value of data assets for an organization?</li> </ul> <p>13. Future challenges for the internal auditor.</p> <p>14. Should consider data that is owned, outsourced, or cloud-based.</p> <p>15. Data governance maturity model.</p> <p>16. Technology and tools that can be used to manage master data:</p> <ul style="list-style-type: none"> <li>• For example: There are 50 or more vendors who provide tools to analyze unstructured data.</li> <li>• Another example: Natural language tools may be especially useful for the internal auditor.</li> </ul> <p><i>Note 1: Both structured and unstructured data should be addressed when discussing the topics.</i></p> <p><i>Note 2: The scope of this project does not include forensic investigation.</i></p>
<b>Methodology</b>	The researcher should propose a methodology and describe how that methodology will answer the research questions.
<b>Sample Size and Description</b>	<p>The researcher should propose a methodology and describe how that methodology will answer the research questions.</p> <p>The researcher will be able to contact IT audit directors, managers, and staff that are listed in The IIA database.</p>
<b>Researcher Qualifications</b>	The researchers should be knowledgeable about both internal audit, risk management, and computer sciences. They should have experience in environments where data governance, data classification, etc. have been addressed.
<b>Time Frame</b>	6–9 months
<b>Length of Book or Report</b>	80 to 100 pages (including a data governance maturity model)
<b>Other Possible Content Uses</b>	Articles, seminars, template for data classification.
<b>Resources to Consult</b>	IIA Practice Guides, Auditing Privacy Risks, 2 <sup>nd</sup> Edition; <i>GTAG 17: Auditing IT Governance</i> ; <i>GTAG 16: Data Analysis Technologies</i> ; <i>GTAG 3: Continuous Auditing: Implications for Assurance, Monitoring, and Risk Assessment</i> ; and <i>GTAG 9: Identity and Access Management</i> . Gartner Group reports; Forrester Group reports; any related ISACA reports.

**Comment [LC1]:** This is a repeat of the entry above it?

**INTERESTED RESEARCHERS AND AUTHORS, PLEASE PROCEED  
TO THE NEXT SECTION, PROPOSAL SUBMISSION GUIDELINES**

## PROPOSAL SUBMISSION GUIDELINES

The Institute of Internal Auditors Research Foundation (IIARF) is the global leader in providing research and knowledge resources to enhance the internal audit profession.

Proposals should outline how the requirements of the RFP will be met. Proposals should not exceed **five pages** exclusive of the summary page and appendices described below, and should be organized as follows:

1. Proposal Summary Page
  - a. Name of the priority topic being addressed.
  - b. Product type (education, applied research, or theoretical research).
  - c. Proposal title. (This title should be specific to the proposal, not the same as the name of the priority topic.)
  - d. Date proposal was submitted.
  - e. Primary researcher's name and contact information.
  - f. Proposal abstract. (This should be one to two paragraphs, including research need, primary audience, methodology, and a description of the primary deliverable.)
2. Project Description
  - a. Research questions.
  - b. Application/implications for internal auditors.
  - c. Topics/issues.
  - d. Methodology. (Explain how the proposed methodology will answer the research question. Include drafts of surveys or interview guides in appendices. An incomplete methodology will cause a research proposal to be returned.)
  - e. Sample size and description.
3. Research Team and Budget Description
  - a. Proposed research team members with a *brief description of their roles and qualifications*. (Describe research capabilities and/or academic qualifications related to the topic. Show that an experienced internal auditor is on the research team.)
  - b. Time frame.
  - c. Budget. (Give itemized budget and tell who receives funds.)
4. Deliverable Description
  - a. Length of book or report.
  - b. Other possible content uses.
5. Appendices
  - a. First draft of the interview guide, survey questions, and/or analysis methodology (if applicable).
  - b. Curriculum vitae (CV) for each researcher (three pages maximum).
  - c. Previous researcher affiliation with The IIA (previous research or educational products produced, volunteer participation, chapter officer, etc.).

Submit proposals by **MARCH 11, 2013**, via email to: [research@theiia.org](mailto:research@theiia.org)

Further information: [research@theiia.org](mailto:research@theiia.org), Tel: +1-407-937-1356, Fax: +1-407-937-1101