SARA explained: an auditor-in-the-loop LLM tool for sustainability report assurance

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Short answer: SARA (Sustainability Reporting Assistant) is a Microsoft Word add-in described in an arXiv paper submitted on 23 November 2026 and accepted as a poster at IEEE BigData 2026. It recommends which passages of a draft sustainability report address each of roughly 1,700 regulatory requirements and predicts a compliance verdict while the auditor stays in control. The authors report about a sixfold cost reduction and 42% lower runtime than feeding the full report to the model, and say it is in production at PwC Germany's sustainability-assurance practice.

TL;DR The short version

- SARA is a Word add-in that suggests which passages of a draft sustainability report address each of about 1,700 regulatory requirements and predicts a compliance verdict, with the auditor in control.
- The authors report about a sixfold cost reduction and 42% lower runtime than feeding the whole report, and say it is in production at PwC Germany.
- It is a short poster paper; the reusable pattern is to narrow what the model reads before asking it to judge.

Read online, listen to it, or change the text size: https://blogs.iictp.org/sara-auditor-in-the-loop-sustainability-report-assurance-llm-explained

What is SARA?

Assurance professionals map a company-specific checklist, drawn from roughly 1,700 regulatory requirements, onto the relevant passages of long, repeatedly revised drafts and judge compliance. According to the abstract by Lars Hillebrand and colleagues, SARA treats this as content-based recommendation over a fixed regulatory taxonomy.

How it works

- **Word add-in.** The auditor works inside the document.
- **Per-requirement matching.** For each requirement the system recommends passages and predicts a compliance verdict.
- **Topic-prediction filtering.** Before the language model matches a requirement, a step predicts which topics the requirement belongs to, so only relevant report parts are sent to the model.
- **Human in control.** The auditor accepts or rejects each recommendation.

What is new compared with earlier approaches

The obvious approach is to give the whole report to the model for each requirement. Filtering by topic first cuts the text sent, which is where cost and time go.

Results reported by the source

- On expert-annotated reports, topic-prediction filtering reduces matching cost about sixfold and runtime by 42% versus feeding the full report to the model.
- The paper says it is in production use across PwC Germany's sustainability-assurance practice.
- The abstract does not give accuracy figures in the text I read.

Limitations and open questions

- This is a five-page poster paper, so details are short.
- A compliance verdict is a judgement; the abstract does not report how often the prediction agrees with auditors.
- The taxonomy is fixed, so changes in regulation require updates. Sources were read on 25 November 2026. Products, rules and standards change, so check the linked originals before you rely on any detail.

How an assurance team could pilot a similar tool

1. Pick one standard and one report type, with a checklist you can encode.
2. Measure how often the suggested passage is the one an auditor would pick.
3. Record cost and time per requirement with and without filtering.
4. Keep the auditor's sign-off and the working papers as the record of judgement.

What it means for CA and audit practitioners

The pattern is useful beyond sustainability: narrow what the model reads before asking it to judge. It also shows the professional model: the tool recommends, the practitioner decides. See SEC roundtable on machine-understandable data for the data-standards side.

Frequently asked questions

- **What is SARA?** A Word add-in that recommends passages and compliance verdicts for roughly 1,700 sustainability-reporting requirements.
- **What savings does it report?** About sixfold lower matching cost and 42% lower runtime.
- **Who uses it?** The paper says PwC Germany's sustainability-assurance practice.
- **Does it replace the auditor?** No, the design keeps the auditor in full control.

Related reading

- SEC roundtable on machine-understandable data and XBRL
- Investors ask ISSB preparers to show their workings

- AI Practitioner certification

> Related credential: AI Practitioner. Explore the exam facts and syllabus.

Sources and further reading

1. Hillebrand L, de Oliveira TBF, Dilmaghani T, Khaled M, Das W, Sifa R. SARA: An Auditor-in-the-Loop LLM Recommender for Sustainability Reports. arXiv 2611.30839, 23 Nov 2026 (accepted as a poster at IEEE BigData 2026). arxiv.org/abs/2611.30839

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