

Questions and answers regarding Chamada Pública 2025-01

#	Questions	Answers
0	0. What language should the application present information and results to its users?	The application should primarily present information and results in Spanish, as it is the most widely spoken language among the 11 participating countries. To promote inclusivity and regional integration, support for English and Portuguese is also recommended—particularly for documentation, training materials, and user interface language settings. Furthermore, the application should be developed using internationalization-friendly practices, such as using plain text instead of text embedded in images, and semantic HTML. This will allow accurate automatic translation by browsers, such as Chrome, ensuring accessibility for users who rely on browser-based translation tools.
1	1. Is it possible to share the budget allocated for this project?	At this stage, it is not possible to share the budget allocated for the project. However, proposals should be formulated based on realistic cost estimates and a clear breakdown of resources, considering the scope described in the Terms of Reference. Cost-effectiveness, scalability, and sustainability will be key criteria in the evaluation of proposals.
2	2. Are the methodological definitions of the proposed indicators (125, 143, 145) already available, or are they expected to be developed as part of the project?	CISAT is the Climate Change Statistics and Indicators Self-Assessment Tool (CISAT) developed by the Expert Group on Environment Statistics (EGES), coordinated for UNSD, to support the implementation of the Global Set of Climate Change Statistics and Indicators (https://unstats.un.org/unsd/envstats/Climate%20Change/cisat.cshtml). The framework used in this project is the Global Set of Climate Change Statistics and Indicators through the CISAT use (https://unstats.un.org/unsd/envstats/climatechange.cshtml). Preliminary methodological definitions aligned with the CISAT framework are available for indicators 125, 143, and 145. However, given the diversity of data sources and statistical capacities across participating countries, the consulting team is expected to play a key role in refining, validating, and adapting these methodologies. This will ensure their applicability in different national contexts and their feasibility for automation and integration into the proposed platform.

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3	3. Are data sources already identified by country, or is the consulting team expected to explore and validate new (alternative or traditional) sources?	Some data sources have already been preliminarily identified by the participating countries, especially for traditional datasets. However, the consulting team is expected to explore, assess, and validate both traditional and alternative data sources, such as Earth observation data, administrative records, and other innovative inputs. This exploratory component is key to ensuring the sustainability, granularity, and timeliness of the indicators. It is also essential that the team takes into account national regulations and institutional protocols when working with non-traditional data sources, ensuring that their use is aligned with each country's legal and policy frameworks.
4	4. Will the application be hosted independently or under a SCIENCE system?	The application is expected to be hosted independently, as the SCIENCE system does not provide hosting infrastructure. The consulting team should propose a cloud-based architecture, with emphasis on portability, scalability, and sustainability. The use of cloud-native technologies, including containerization (e.g., Docker) and orchestration tools where appropriate, is encouraged to facilitate deployment across different environments and potential migration to national or regional infrastructures in the future.
5	5. Will there be an additional budget for licenses (e.g., real satellite imagery) after the data capture strategy is defined?	At this stage, no additional budget is guaranteed for acquiring commercial licenses (e.g., high-resolution satellite imagery). Therefore, the data capture strategy should prioritize the use of open and freely available sources (e.g., Sentinel, Landsat, OpenStreetMap). However, if the use of licensed data proves essential for specific indicators, the consulting team may justify these needs in their proposal for consideration, ensuring full transparency on costs and licensing terms.

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6	6. What level of AI application is expected?	The expected level of AI application is pragmatic and task-oriented, supporting the automation of key steps in the production of environmental and climate change indicators. This may include the use of machine learning models for land cover classification, change detection from satellite imagery, anomaly detection in time series, or natural language processing (NLP) for extracting structured information from unstructured reports. For example: Supervised learning algorithms (e.g., Random Forest, SVM, XGBoost) may be applied to classify land use from Sentinel or Landsat imagery. Deep learning models (e.g., CNNs, segmentation) can be used to detect deforestation or urban expansion patterns. NLP techniques could support metadata enrichment or extract qualitative signals from national reports or news feeds. Regardless of the approach, AI applications should be designed with a strong emphasis on explainability, transparency, and reproducibility, especially if their outputs are intended to inform official statistics or public policy.
7	7. If the prioritized indicators are not viable for automation, are there predefined guidelines for proposing alternative indicators?	There are no strict predefined guidelines for replacing indicators that are not viable for automation. However, any proposal to introduce alternative indicators must be: Methodologically justified, ensuring a solid statistical basis; Aligned with the thematic scope of the CISAT framework to maintain consistency; Technically feasible for automation using either available or alternative data sources. The consulting team is encouraged to maintain close coordination with the Project coordination team to guarantee the relevance, comparability, and institutional acceptance of all proposed alternatives.

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8	8. Are there any suggested or already used technologies/platforms by the countries that we should consider (e.g., Google Earth Engine, specific GIS platforms)?	Yes, several countries have already experimented with or adopted specific platforms and tools in their national processes. Notably: Google Earth Engine (GEE) is widely used for satellite data processing and visualization, QGIS and ArcGIS are common GIS platforms at the national level, Some countries have explored Big Data platforms or custom dashboards using tools like Power BI, Tableau, or Python-based frameworks. While the consulting team is free to recommend the most appropriate technology stack, interoperability with these commonly used platforms and adherence to open standards is strongly encouraged to ensure adoption, capacity building, and sustainability.
9	9. Is it considered viable to incorporate low-code or no-code components in certain layers of the solution (e.g., front-end or visualizations), as long as they meet the required open standards?	Yes, the incorporation of low-code or no-code components is considered viable — particularly for visualization, dashboards, and user interaction layers — as long as they: Adhere to open standards (e.g., OGC for geospatial data), Ensure data security and version control, and Allow for integration with backend services and APIs. This approach can improve maintainability, user autonomy, and adaptability across countries with different levels of technical capacity. However, core processing components (e.g., data pipelines, indicator calculations) are expected to follow conventional coding and scripting best practices to ensure transparency, auditability, and reproducibility.

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10	10. Are there national or regional statistical or geospatial systems with which the application must interoperate?	Yes, the application should be designed to interoperate with existing national and regional statistical and geospatial systems, wherever possible. This includes: National Statistical System (NSS) - the network of organizations within a country that jointly produce and disseminate official statistics. This system typically includes a National Statistical Office (NSO) as its core, along with other government agencies, ministries, and sometimes even private institutions that contribute to collecting, processing, and publishing statistical data. (https://unstats.un.org/capacity-development/handbook/html/topic.htm#t=Handbook%2FC4%2FStructure_of_the_national_statistical_system.htm) Geospatial data platforms (e.g., national SDI — Spatial Data Infrastructure), Environmental monitoring platforms (e.g., those managed by ministries of environment), And regional frameworks, where applicable, aligned with CISAT, SCIENCE, or IDB initiatives. To support interoperability, the solution should adopt open data formats, standard APIs, and where feasible, align with international frameworks such as SDMX (for statistical data) and OGC standards (for geospatial data).

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11	11. Are there specific criteria or existing frameworks on data governance, version control, anonymization, etc., that must be adopted beyond GDPR/LGPD?	Beyond GDPR and LGPD, countries may have specific national frameworks or institutional policies related to data governance, anonymization, and access control. While these vary, the project is expected to: Follow international best practices in data privacy and protection, Implement version control mechanisms (e.g., for data, code, and metadata), Ensure traceability and auditability of transformations, and Adopt data minimization and anonymization techniques, especially when dealing with personally identifiable or sensitive information. The consulting team should be prepared to map and comply with country-specific regulations, in coordination with national stakeholders. Where applicable, frameworks such as FAIR data principles, Open Data Charter, or UN Principles on Official Statistics can be used as guiding references.
12	12. What type of support is expected during the 24 months following implementation (corrective maintenance, evolutionary, help desk, etc.)?	We expect to receive corrective maintenance and help desk support during the 24 months following implementation. Evolutionary maintenance will only be required during this period in case of changes to the data sources used by the tool.
13	13. What user profiles are expected to interact with the tool (technical staff, decision-makers, general public)?	The tool is expected to serve technical staff from National Statistics Systems (NSS) , who will manage data ingestion, processing, indicator generation and reporting.

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14	14. Should training materials consider multilingualism (Spanish, Portuguese, English)?	Yes. Training materials should explicitly prioritize Spanish. Portuguese and English should also be included, especially for documentation aimed at international partners, developers, or future scalability. All core materials — such as user manuals, training videos, and tutorials — should be made available at least in English, Spanish and Portuguese, with terminology consistency and cultural adaptation where necessary to support effective learning across countries.
15	15. Is the tool expected to be scalable to more countries in the region beyond the initial group of 11?	The tool is initially designed for use in the 11 countries that are part of the implementation phase. However, its architecture, documentation, and licensing model should facilitate future expansion with minimal restructuring. Scalability considerations include: - Modular design to support country-specific configurations, - Flexible data ingestion and indicator definition layers, - And multilingual support, to accommodate new linguistic contexts. Early design decisions should aim to maximize reusability and portability across diverse institutional and technical environments in the region.
16	16. How many users are expected to use the platform in total and per country?	While precise numbers may vary by country, initial estimates suggest: - Between 10 and 30 users per country during the early operational phase (including technical teams, analysts, and decision-makers), - Resulting in approximately 150 to 300 users regionally across the 11 participating countries. These numbers may increase as the platform is scaled or integrated into other institutional processes. The solution should therefore be designed to support hundreds of concurrent users, with role-based access, audit trails, and scalable infrastructure to handle future growth.

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17	17. How frequently are users expected to consult or generate indicators? (daily, monthly, campaign-based, emergency-based)	The frequency of use will vary depending on the user profile and the nature of the indicators. In general, users may interact with the system on a monthly or quarterly basis to process and validate new data inputs or run indicator updates; In some cases (e.g., early warning indicators), more frequent or near-real-time consultation may be expected. The system should support scheduled and on-demand generation of indicators, and be capable of scaling up temporarily in response to emergency events or climate-related crises.
18	18. What institutional actors will be available to collaborate in gathering requirements and validating deliverables (NSOs, ministries, IDB, others)?	The main institutional counterparts for requirement gathering and validation will be: The National Statistics Systems of the project participating countries, which are the official contact points and early users of the tool; The Hub team and project staff from the BPR initiative, who will support methodological guidance, consolidate inputs across countries, and ensure alignment with regional goals; Representatives from SCIENCE and the IDB, who may provide additional oversight and strategic guidance. At this stage, ministries or sectoral institutions are not expected to be directly involved, although their data may be referenced via the NSOs.
19	19. Is the consulting team expected to conduct in-person visits, workshops, or on-site training in any of the countries?	The primary plan is for coordination, workshops, training, and support to be conducted remotely, using virtual collaboration tools agreed upon with the project team and participating countries. However, it is likely that some validation workshops may take place in person, depending on country preferences and project milestones. In such cases, travel and related expenses would be covered separately, subject to prior approval and budget availability. The consulting team should indicate in their proposal whether they are available for potential in-person engagements, while designing a solution that remains fully functional and supportable in a remote-first environment.

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20	20. Should the costs of software licenses, commercial APIs (e.g., paid satellite imagery), or cloud services be included in the consultant's budget?	Yes. The proposal should explicitly include the estimated costs of any required software licenses, commercial APIs, paid satellite imagery, or cloud services, to ensure full visibility of the total cost of ownership. While the project encourages the use of open-source tools and free data sources whenever possible, if commercial components are essential to achieve the expected results, they must be: Justified in the technical proposal, and Clearly budgeted as part of the consultant's financial proposal. Any optional components that could enhance the solution but are not strictly necessary should be presented as modular cost items, allowing the project team to assess them separately.
21	21. What is the expected level of traceability and auditability of the data processed by the platform? Should detailed logs be generated for each transformation applied to the data?	A high level of traceability and auditability is expected. The platform should generate and maintain detailed logs for each step of the data lifecycle, including: Ingestion (data sources, formats, timestamps), Transformations (scripts, parameters, versions), Indicator calculations (methodologies applied, assumptions), User interactions, where relevant (e.g., manual overrides or validations). This ensures transparency, reproducibility, and institutional accountability, especially since the outputs may inform public policies or official statistics. Logs should be securely stored, time-stamped, and ideally version-controlled, with access permissions based on user roles.

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22	22. Is there a common taxonomy or semantic standard among the 11 countries for the indicators, or should it be defined as part of the project?	There is no fully established common taxonomy or semantic standard currently in use across all 11 countries for the CISAT indicators. Therefore, part of the project's scope will involve: Harmonizing indicator definitions and metadata, Developing or refining a shared taxonomy, and Ensuring semantic consistency across countries, platforms, and languages. Where appropriate, the consulting team is encouraged to adopt ontologies and controlled vocabularies to standardize concepts and relationships, facilitating interoperability and alignment with international frameworks, such as SDG metadata, UNSD environmental statistics guidelines, and other thematic standards. This work should be conducted collaboratively with the NSSs and the project coordination team.
23	23. Are there any limitations on the use of cloud services (AWS, Azure, GCP) by the participating countries?	In general, there are no formal restrictions on the use of cloud services such as AWS, Azure, or Google Cloud Platform across the participating countries. However, some countries may have specific national guidelines or internal policies regarding: Data residency or storage location requirements, Sovereignty over sensitive data, and Preferred vendors or public infrastructure options. Therefore, the proposed architecture should be cloud-agnostic where possible, and allow for flexibility in deployment models (e.g., multicloud, hybrid, or on-premises alternatives) to accommodate country-specific constraints. Consultation with each NSO during the design phase will be essential to ensure compliance.

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24	24. Are there data governance restrictions by country that we should consider when defining the architecture (multicloud, on-premises, hybrid)?	Yes. Data governance restrictions may vary by country, particularly in relation to: - Data localization and residency requirements, - Security and sovereignty of sensitive datasets, and - Institutional preferences for public vs. private infrastructure. To address this diversity, the architecture should be designed with flexibility in mind, allowing for: - Multicloud or hybrid deployments, where processing occurs in the cloud but data remains in-country; - Modular components that can be adapted to on-premises or sovereign environments if required; - And clear data flow controls, access management, and auditability features to meet local governance standards. Early engagement with each NSS will be essential to tailor the deployment strategy to their regulatory context.
25	25. What level of participation or co-design is expected from member countries during the methodological and technical development phase?	A high level of participation and co-design is expected from the member countries, primarily through their National Statistics Offices (NSOs). Their engagement is essential to: - Validate indicator methodologies, - Adapt the technical solution to national contexts, and - Ensure institutional ownership and sustainability. To facilitate effective collaboration, each country will be encouraged to designate a focal point with a project coordination role to interface with the consulting team and project coordinating team. This person will support requirement gathering, testing, and feedback processes. The development approach should be iterative and collaborative, with mechanisms such as working groups, shared backlogs, and regular virtual reviews to promote shared decision-making and alignment.

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26	26. Does data visualization require a role-based approval process?	Yes. The platform should support a role-based access and approval model for data visualization, especially when visual outputs are intended for public dissemination or inter-institutional use. Key considerations include: Internal review workflows, allowing technical staff to validate outputs before publication, Permission levels to distinguish between editors, reviewers, and viewers, And logging of approval actions, to ensure traceability and accountability. This process is particularly relevant when dealing with sensitive data, provisional estimates, or AI-generated outputs, and should be configurable according to each country's governance needs.
27	27. What is the estimated frequency of indicator and estimate updates?	The frequency of updates will depend on the nature of each indicator and the availability of input data, but the general expectation is: Quarterly or semi-annual updates for most indicators, Annual updates for those based on slower or official data cycles, And in some cases, monthly or near-real-time updates, especially when leveraging satellite imagery or alternative data sources (e.g., for early warning or monitoring purposes). The system should be flexible enough to handle multiple update frequencies, support scheduled or on-demand processing and maintain version histories for each published estimate.

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28	28. How will the results generated by AI models be validated?	The results generated by AI models should be validated through a multi-layered approach, including: - Comparison with known ground truth or official data, where available; - Review by technical experts from NSSs and the project team; - Visual inspection tools (e.g., map overlays, time series plots) to allow intuitive verification of outputs; And, when feasible, manual validation samples or cross-validation with alternative algorithms. Validation protocols should be clearly documented and integrated into the platform's workflow. Given the potential use of results in public reporting, explainability and transparency of the models are essential — including access to logs, parameters, and input data used.

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29	29. How will the success of the functional prototype be evaluated once implemented?	The success of the functional prototype will be evaluated based on a combination of technical, functional, and user-centered criteria, including: Functional completeness: coverage of the key indicators, ability to process data, generate outputs, and visualize results; Usability and accessibility: ease of use by different user profiles (technical staff, decision-makers), including multilingual support; Performance and stability: responsiveness, processing time, and error rates; Integration and interoperability: capacity to connect with national systems and handle real data flows; User validation: structured feedback from NSOs and project coordination team through workshops or test scenarios; Documentation and replicability: clarity of technical documentation and ability to replicate processes in other countries. A formal validation and feedback cycle will be carried out with participating countries to inform final adjustments and readiness for scale-up.

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30	30. Will the National Statistics Institutes (NSOs) of the countries provide guidance on official (structured) data sources, or should the entire solution be based on alternative data sources defined by us?	Yes, the NSS of each country will provide guidance on official and structured data sources relevant to the selected indicators. As part of the preparatory work, a preliminary inventory of data sources has already been conducted, which will serve as a starting point for identifying available inputs. The consulting team is expected to: - Review and expand upon this preliminary inventory, - Propose and validate complementary alternative data sources, where needed, - And work closely with the NSOs to ensure that all data sources used — whether traditional or innovative — are institutionally acceptable, methodologically sound, and technically feasible. The final architecture should be flexible enough to integrate hybrid data streams, combining official data with satellite, administrative, or other non-traditional sources.
31	31. Do the NSOs of the 11 countries have progress in building the indicators according to the self-assessment guide and CISAT tool recommendations, or is this project the first step in that direction?	Most NSSs have already made initial progress in aligning with the CISAT tool and self-assessment guide. As part of the preparatory phase of the BPR initiative, countries completed a self-assessment using the CISAT tool, and some have started methodological or data-related work on selected indicators. However, the level of maturity varies significantly among countries. For some, this project will represent a continuation and consolidation of ongoing efforts, while for others it will serve as a first structured step toward automation and operationalization of the indicators. The project should therefore adopt a flexible and adaptive approach, allowing for country-specific entry points and tailored support.
32	32. Should the calculation of indicators consider IPCC scenario modeling? If so, which SSP(s)?	Yes, for indicators where future projections or climate scenario data are relevant, the calculation may incorporate IPCC scenario modeling, specifically using the Shared Socioeconomic Pathways (SSPs). At this stage, no specific SSP scenario is mandated. However, the consulting team is encouraged to: - Use the most policy-relevant and regionally applicable SSPs, such as SSP2-4.5 (intermediate emissions) or SSP5-8.5 (high emissions); - Clearly document all assumptions, limitations, and sources of climate model data; - And, where feasible, enable configurability so users can explore multiple scenarios over time.

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33	33. The document mentions "...develop additional didactic materials to facilitate user understanding and effective use of the application." What is the user profile, and what is considered didactic material?	The primary users of the didactic materials will be technical staff from NSSs and project stakeholders involved in data ingestion, indicator generation, and visualization. "Didactic materials" include: User manuals, installation/configuration guides, and quick-start documents, Video tutorials, screen recordings, and interactive walk-throughs (e.g., using tools like Loom, Scribe, or Camtasia), Step-by-step instructions for common workflows, FAQs, glossaries, and troubleshooting checklists.
34	34. If it becomes necessary to propose alternative indicators, can they be outside those listed in the CISAT initiative taxonomy?	Yes, in cases where the original indicators are not feasible for automation or data availability is insufficient, alternative indicators may be proposed. However, any such proposal must: Consider indicators that use alternative data sources (big data) and AI to be produced; Be aligned with the CISAT framework's thematic focus, Be methodologically robust and justifiable, and Undergo prior review and validation by project leadership. The intention is to maintain coherence with the initiative's goals while allowing for flexibility and innovation where justified by technical constraints or national context.
35	35. Is part of the objective to develop new statistics for CISAT indicators, specifically those in Tier 2 and 3, to move them to Tier 1 and 2 respectively through the incorporation of alternative data sources?	Yes, part of the project's broader objective is to strengthen the statistical maturity of selected CISAT indicators. For indicators currently classified as Tier 2 or 3, the project aims to improve their methodological robustness and data availability, potentially supporting their advancement toward Tier 1 or Tier 2 status. This may involve the use of alternative or non-traditional data sources, such as Earth observation, big data, or administrative records, as a means to enable more frequent, granular, or cost-effective production of indicators.

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36	36. Will a process be carried out with the CISAT group to standardize statistics and methods from alternative data sources, or will this be under SCIENCE's control?	This project is an initiative led by the implementing partners, and while the CISAT framework serves as a guiding reference, the project does not aim to develop or impose new official standards or methodologies on behalf of the CISAT group. <i>Any processes to standardize statistics or harmonize methods particularly when using alternative data sources will be carried out by the project team, in collaboration with participating countries and under the technical coordination of SCIENCE.</i>
37	37. Considering the different levels and sources of data available in each country, what is the minimum territorial unit expected to be covered in the automation of indicators? For example, at the state or department level. Is it possible to develop at a smaller territorial unit than the country level and later replicate or extrapolate in a new scope?	The minimum territorial unit for indicator automation is expected to be at the subnational level, typically at the state, department, or province level, depending on the country's administrative divisions and data availability. Where higher-resolution data exists, it is feasible and desirable to develop indicators at smaller territorial units (e.g., municipalities, districts, or census tracts) to improve granularity and local relevance. Such finer-scale automation can then be: Aggregated upward to broader territorial units for regional or national reporting, Or replicated and adapted for similar subnational units across countries. The solution architecture should therefore be designed with flexibility and scalability to accommodate varying territorial resolutions and allow for progressive enhancement of spatial detail.

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38	Required experience: In the case of a consortium, can the professional experience of the founding partners or key members of the participating companies be considered valid for the fulfilment of the minimum requirements and/or for the technical evaluation, even if this experience has not been formally carried out under the current corporate name?	The experience to be demonstrated is that of the people who will do the work, and will be named in the proposal.
39	Deadline for submission of proposals: Considering the technical complexity of the project and the need for adequate articulation between the members of the consortium, would there be the possibility of extending the current deadline for submission of proposals, in order to guarantee a high-quality proposal, in accordance with the established requirements?	The deadline for submitting proposals is now extended until 8 June 2025, considering the time zone in Rio de Janeiro, Brazil (GMT-3).

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40	Governance and maintenance of the solution: Considering that the application must incorporate automated processes and artificial intelligence models that require periodic maintenance, updates and adjustments, what will be the technical governance model foreseen after the end of the 24 months of support offered by the consultancy? Is there any defined institution that will assume responsibility for the operation, update or technical coordination of the solution in the medium and long term?	At present, there is no model defined for governance and maintenance after the end of the 24 months. This is a topic that the project management committee will consider in the coming months and will discuss with the selected consultant.
41	Could you tell us if there is a specific currency recommended for the presentation of the budget in the financial proposal?	You may present the financial proposal in US Dollars. If you will use another currency, please make sure to specify which currency was used. Conversions to US Dollars will be made by the selection committee when comparing proposals in terms of costs.