Gen 4#3 RfP Question and Answers 22nd June 2016

Questions

1. Why are you saying that the location for Gen 4#3 is TBD when it is to be an LSST complement?
2. In general Gemini prefers instruments operating with its Adaptive Optics facilities, what about for Gen 4#3?
3. Can institutes beyond the Gemini partnership submit a proposal, how will they be assessed?
   How will cost distribution across partner countries be assessed?
   Chile is part of the partnership as a host country, how is this factored?
   Australia and South Korea are limited-term partners, how is this factored?
4. What happens if LSST is late?
5. Will the budget of $15M increase with inflation?
   Will the budget vary if more than one conceptual design is funded?
   How should we deal with currency exchange?
   Can we submit a bid for greater than $15m and request telescope nights for compensation such that the cost to AURA is $15m?
6. Should the risk mitigation fund be included in the $15M budget?
   Should we use the term "risk mitigation" rather than contingency in the proposal?
   What types of items should be covered by the risk mitigation funds?
   What should be the ballpark estimate?
   How do we phase the 15% contingency into the schedule?
   What does 'unallocated' mean? How is this related to the items identified in the risk register?
7. Are you requiring a particular format for the documents for the proposal?
   Are you requiring a particular format for Contract deliverable documents?
8. Stage Reviews: Who will decide whether the project is ready for a stage review?
9. Telescope Time: If you miss a stage date, but if in the end you complete on time, do you get the entire schedule performance-related Telescope Time?
10. Is there a specific dollar value we should use to value telescope time for Cost Reduction purposes?
    How many hours is a "night" of telescope time?
11. Science Campaign Telescope Time: Should there be discussion of this in the proposal?
12. Do we envision a certain number of nights for the science campaign?
13. Core Capabilities: How strict are the values in the Core Capabilities table?
14. What does the word "band" mean? Different instruments concepts may have different definitions given the differencing number of channels.
15. Coverage in the atmospheric absorption band, would this be an additional capability and, if so, how would it be ranked?
16. Is there a reason that term resolution (time domain) does not appear in core capabilities, though they appeared in the ones for the GIFS studies.
17. Additional Capabilities table: Does spatially resolved mean long slit as it distinct from IFU?
18. Can proposers that are not in consideration for selection be notified upon the start of contract negotiation with the selection team(s)?
19. If the contract negotiation schedule slips, how does that affect the contract project schedule?
20. Project Manager Staffing:
    1 FTE of Project Manager effort per year is potentially unneeded and will add cost to the project. Would you accept variations such as a dedicated person fulfilling more than one role or more than one person in the project manager position?

21. How does the money flow between the lead institute contractor and subcontractor?
    Are there alternatives models available to the lead institute contractor/subcontractor model?
22. How do you handle telescope time for subcontractors?
23. Does the in-kind contribution get treated equally if coming from the sub as if coming from the lead?
24. Is it possible to submit the proposal by the due date, and then between the subcontractor signatures between the proposal submission date and contract negotiation dates?
    What would happen if we receive additional in-kind contributions after the submission date?
25. Budget Narrative Form: Is the contractor risk part of section H?
    Should in-kind contribution be included in the form?
    If giving an in-kind contribution, should it be included in the budget form?
    Should in-kind contribution appear in other items such as the project plan and the schedule?
26. Is travel to reviews covered by the contractor or AURA?
27. How will objections to wording in the contract be processed?
    How will suggested changes to the Statement of Work be processed?
28. Is there a document that we can use for future AO system baseline capabilities?
29. Do we still worry about laser clearing house, planes, and satellites?
30. How much telescope time does Gemini plan to spend on complementing LSST?
31. How do I structure up-scopes and down-scopes?

Answers

1. Why are you saying that the location for Gen 4#3 is TBD when it is to be an LSST complement?

The Gen 4#3 Delivery Location is Cerro Pachón (Gemini South) as defined in the Statement of Work (Gen4#3-03.2) Definition (Clause 1). The location shall be confirmed at the start of the Critical Design Stage.

The Gen 4#3 Delivery Location must be confirmed by the Gemini Board. It will be reconsidered as part of the Preliminary Design Review, which will be after we have received the proposals, assessed the science cases, signed contracts, and evolved the design. However, we highly expect the Gen 4#3 Delivery Location to remain Gemini South.

2. In general, Gemini prefers instruments operating with its Adaptive Optics facilities, what about for Gen 4#3?

In general, Gemini receives more return from instruments if they can operate both with and without Gemini's AO systems. For the Gen 4#3 instrument, taking advantage of Gemini AO systems is seen as a desired medium-priority additional capability as stated in the RFP Main Document (Gen4#3-01) clause 2e. It is not part of the core capabilities and hence, is not required.

3. Can institutes beyond the Gemini partnership submit a proposal, how will they be assessed?
   How will cost distribution across partner countries be assessed?
   Chile is part of the partnership as a host country, how is this factored?
   Australia and South Korea are limited-term partners, how is this factored?

Yes, institutes beyond the partnership can, and are encouraged to, submit a proposal or join a team that submits a proposal. See Gen4#3-01 1h.

The proposal must have a lead institute and that lead institute is not required to be a Gemini partner country.

The proposed cost distribution (IDF) across partner countries is a selection criteria, see Gen4#3-01 6 Selection. It is assessed by the selection panel, not the evaluation panel. The Instrument Development Fund (IDF) Contributions (as shown in Gen4#3-03.1 1g) were extracted from the international agreement. Cost distribution will be assessed by looking at major subcontracts and major purchases by the lead institute.

Chile is a host country and is part of the partnership but does not contribute to the IDF fund and hence does not appear in Gen4#3-01 1g. However, Chile being a host country will be taken into consideration.

Australia and South Korea are limited-term partners; they do contribute directly to the IDF fund but do not appear in Gen4#3-01 1g. However, Australia and South Korea being limited term partner countries will be taken into consideration.

4. What happens if LSST is late?

The Gen 4#3 project is highly schedule driven and must be commissioned by December 31, 2022, to coincide with the planned start of LSST survey operations (See Gen4#3-01 1d).

Once a contract is signed, the contractor will be legally bound to deliver by the dates stated in the contract, including the completion date. Schedule performance-related telescope time will be based on those dates.

If the LSST is delivered late then the Gemini community would have additional time to use the Gen 4#3 instrument before LSST officially starts its survey. Much science can be done without LSST and likely can be done with early LSST pre-survey data. Note the December 31, 2022, date assumes the LSST uses all its planned schedule contingency.

5. Will the budget of $15M increase with inflation?
   Will the budget vary if more than one conceptual design is funded?
   How should we deal with currency exchange?
   Can we submit a bid for greater than $15m and request telescope nights for compensation such that the cost to AURA is $15m?

$15M is the total amount available to award a contract at the time of contract signing (See Gen4#3-01 1f). Inflation increases must be accounted for in the proposal.

The budget for any one proposal is $15M. If AURA chooses to fund two conceptual designs, AURA will ensure the total for the down selected contract could still be $15M, including the Conceptual Design Stage.

All proposals must be submitted in USD. If the contract is outside the US or major components such as subcontracts or major items are purchased outside the US then the exchange rate between countries on May 5, 2016 (when the RFP was released), using www.xe.com should be used in converting currencies to USD. We would negotiate who holds the currency risk at the time of contract negotiations.

Teams cannot submit a bid that is greater than $15M and request telescope nights for compensation to lower the price. The telescope time compensation would only be considered for bids of $15M or lower, and would be a negotiated factor in final contractor selection. However, teams may provide any desired amount of un-compensated, in-kind contributions providing the total cost to AURA is $15M or less.

6. Should the risk mitigation fund be included in the $15M budget?
   Should we use the term “risk mitigation” rather than contingency in the proposal?
   What types of items should be covered by the risk mitigation funds?
   What should be the ballpark estimate?
   How do we phase the 15% contingency into the schedule?
   What does ‘unallocated’ mean? How is this related to the items identified in the risk register?

Yes. Clause 3.2b of the Statement of Work (Gen4#3-03.2) instructs the proposer to include an unallocated risk mitigation budget item beyond the baseline of at least 15% per stage of the project.

The Excel Budget template that the proposers must complete has a line item for the risk mitigation fund. Proposers must include the risk mitigation funds in their budget. The total budget must include the risk

mitigation fund (at a value of at least 15% of the baseline), and the total cost to AURA cannot exceed $15M (See Gen4#3-01 1f).

Teams should use the term “risk mitigation” in the proposal rather than “budget contingency” or “reserve.”

All project risks, with the exception of those identified as AURA Assumed Risks in Article 8 of the main contract (Gen4#3-03.1) and currency exchange, should be covered by the risk mitigation fund. Teams who feel there are items missing in the list of AURA Assumed Risks can submit a tracked changes version and fully justify any proposed changes. These will be subject to negotiation.

Programmatic funds for AURA Assumed risks will be available.

Clause 3.2b of the Statement of Work (Gen4#3-03.2) states the risk mitigation fund should be at least 15% per stage of the project. Any unused funds from one stage will roll over into the next stage.

Proposers must submit Appendix F (Risk Register) as part of the proposal, see Gen4#3-01 section 4. The Risk Register is described in Appendix A.1 of the Statement of Work (Gen4#3-03.2). It should include key risks to schedule, cost, personnel, or any other aspect that would prevent the project from being successful. The risk mitigation fund total needn’t be the total of the estimated cost associated with all risks appearing in the risk register. I.e., it needn’t be allocated to specific risks. However, it should be at least partially justified by using the information that appears in the risk register.

7. Are you requiring a particular format for the documents for the proposal?
   Are you requiring a particular format for Contract deliverable documents?

The Proposal Form (Gen4#3-02) is provided as a Word document. It must be completed and converted to PDF. We request proposals be submitted as a single electronic document in Adobe Acrobat PDF format, as described in Gen4#3-01 5e. Proposal documents can be created in any source format provided they can be converted to .pdf. AURA may ask for the original document source if needed to help with the evaluation and assessment.

For Contract deliverable documents, i.e., documents delivered during the project, AURA expects to receive copies in their original format. See Appendix A of the Statement of Work (Gen4#3-03.2) and the *Gemini Observatory Facility Instrument Common Requirements and Standards Specification document* as referenced in section 4 of the statement of work.

8. Stage Reviews: Who will decide whether the project is ready for a stage review?

See the Statement of Work, Gen4#3-03.2 section 5.4.4 for details on stage reviews. Once both Gemini and the external instrumentation team are confident the project is ready for a stage review, the Technical Representative will determine the date of the review and start the process of arranging the review.

9. Telescope Time: If you miss a stage date, but if in the end you complete on time, do you get the entire schedule performance-related Telescope Time?

Yes.

10. Is there a specific dollar value we should use to value telescope time for Cost Reduction purposes?
    How many hours is a "night" of telescope time?

It is up to each team to determine the value it wants to assign for each received telescope time. The final value will be negotiated with the selected team(s) during the final contract negotiation process. Gen4#3-01 2j requests proposers state their interest in a cost reduction to AURA in exchange for telescope time and to state the amount of the cost reduction.

Section 12b in the Statement of Work (Gen4#3-03.2) notes performance related telescope time is classical time. In general, a night is considered to be equivalent to 10 hours of telescope time.

11. Science Campaign Telescope Time: Should there be discussion of this in the proposal?

Proposals have a 40 page limit and must have a number of required sections. Proposers should submit the strongest proposal possible, given the evaluation criteria and selection process that are described in the RFP Main Document (Gen4#3-01). The science campaign time proposal is not part of this proposal.

12. Do we envision a certain number of nights for the science campaign?

No, there is not a minimum or maximum number of nights. See Appendix A.24 of the Statement of Work. The Science Campaign Proposals will be submitted by the contractor at the end of the Build Phase.

13. Core Capabilities: How strict are the values in the Core Capabilities table?
14. What does the word "band" mean? Different instruments concepts may have different definitions given the differencing number of channels.

Departures from the core capabilities are permitted, providing the justifications and reasons for any significant departures are included in the main body of the proposal. Sufficient details should be included to allow the evaluation team to understand why these departures are advantageous to Gemini, particularly in terms of the impact on science, cost, schedule, and risk.

"Band" refers here to the near IR band and the optical band.

15. Coverage in the atmospheric absorption band, would this be an additional capability and, if so, how would it be ranked?

It is an unranked additional capability and, therefore, has low priority.

16. Is there a reason that term resolution (time domain) does not appear in core capabilities, though they appeared in the ones for the GIFS studies.

Time domain was not considered to be a core capability, but an additional capability. However, if there is driving science, it should be included in the proposal and specified.

17. Additional Capabilities table: Does spatially resolved mean long slit as it distinct from IFU?

Yes.

18. Can proposers that are not in consideration for selection be notified upon the start of contract negotiation with the selection team(s)?

Section 6 of the RFP Document (Gen4#3-01) states that other proposers will not be notified of the results of this procurement until all relevant contracts has been fully executed. This is standard practice at AURA. Note that evaluation, selection, and/or negotiation may take longer than expected, so we advise not to make assumptions based on the schedule.

19. If the contract negotiation schedule slips, how does that affect the contract project schedule?

If the process is extended such that a start date of Feb 2017 is not possible a change in start date and schedule will be negotiated. Gemini will work with the team to develop ways to recover lost time.

20. Project Manager Staffing: 1 FTE of Project Manager effort per year is potentially unneeded and will add cost to the project. Would you accept variations such as a dedicated person fulfilling more than one role or more than one person in the project manager position?

Section 5.2 of the Statement of work (Gen4#3-03.2) states the Contractor shall staff a full-time project manager for the project.

In Gemini's experience, large instrumentation projects without a full-time project manager dedicated to the project have struggled. Some initially did not cost a full-time PM but needed one and incurred a cost increase to the project relative to the submitted baseline. It is Gemini's strong preference for the project to have a full-time PM assigned to the project and we accept the associated cost as an allowable cost of the project. As with other aspects of the statement of work, proposers may propose changes to the Statement of Work; if so, they should justify them by demonstrating how they reduce overall risk to the project.

21. How does the money flow between the lead institute contractor and subcontractor? Are there alternatives models available to the lead institute contractor/subcontractor model?

The contract will include a number of milestones the lead institute will be expected to meet, see Gen4#3-03.1 Article 6. AURA would expect to receive and pay an invoice to the lead contractor on successful completion of the milestone. AURA expects the lead institute to have a similar type of contract with their subcontractor(s). Hence, funds would flow from AURA to the lead institute and then from the lead institute to the subcontractor. AURA cannot pass funds directly to subcontractors without having a contract with them.

In general, AURA contracting with a single lead institute is highly preferred to alternatives, such as contracting directly with multiple institutes. For this RFP, the only allowable method for submitting a proposal is with a single lead contractor, see Gen4#3-01 5a. AURA understands there may be a cost associated with the lead institute managing subcontractors and would potentially consider alternatives during contract negotiations, if it could be demonstrated that doing so would reduce overall project risk.

22. How do you handle telescope time for subcontractors?

Gemini would award telescope time that goes to the instrument team to the lead contractor. How that is then distributed or allocated between the lead contractor and the subcontractors is up to the lead contractor.

23. Does the in-kind contribution get treated equally if coming from the sub as if coming from the lead?

An in-kind contribution coming from a subcontractor is the same as one coming from the lead contractor since AURA only has a contract with the lead institute. In some circumstances, it is plausible that the perceived value and risk of an in-kind contribution could be different depending on the institution providing it, but that assessment is independent of whether the institution is a lead contractor or subcontractor.

24. Is it possible to submit the proposal by the due date, and then between the subcontractor signatures between the proposal submission date and contract negotiation dates?
What would happen if we receive additional in-kind contributions after the submission date?

It is possible to submit a proposal without having subcontracts signed, but it would increase the risk associated with your proposal, which is an evaluation factor. If you do not have subcontracts signed, it would be highly advisable to fully explain the assurances you do have from the subcontractor(s) and what would happen if the subcontracts were not fully resolved by the contract negotiation date.

If you are expecting additional in-kind contributions after the submission date, include them in the proposal and estimate the risk associated with not realizing them. Make it clear they are not guaranteed. If selected, additional beneficial in-kind contributions could be accepted if agreed by both parties.

25. Budget Narrative Form: Is the contractor risk part of section H?
Should in-kind contribution be included in the form?
If giving an in-kind contribution, should it be included in the budget form?
Should in-kind contribution appear in other items such as the project plan and the schedule?

Item H should include the risk mitigation cost per stage and it should be at least 15% of the baseline as requested in clause 3.2b of the Statement of Work (Gen4#3-03.2). The actual amount should be explained and justified and linked to the information in the risk register, but not necessarily allocated to individual line items.

Un-compensated in-kind contributions do not need to be explicitly described in the form. Report the actual cost to Gemini. In-kind contributions proposed in exchange for telescope time should be recorded as their full cash costs to Gemini in the event we do not agree on the in-kind contribution telescope time compensation.

Certain types of in-kind contribution should absolutely appear in the project plan, the schedule, and other management documents. For example, in-kind FTE contributions or hardware contributions

should appear in relevant places and in such a manner that the evaluation panel can assess whether the in-kind contribution is relevant and sufficient.

26. Is travel to reviews covered by the contractor or AURA?

AURA covers all travel costs associated with Gemini staff and review committee members.
The contractor is responsible for all other travel expenses.

27. How will objections to wording in the contract be processed?
    How will suggested changes to the Statement of Work be processed?

AURA and Gemini staff will review and negotiate the contract objections and changes to the Statement of Work with the selected team(s) during contract negotiation stage.
As requested, alternative wording and an explanation should be provided with any contract objections. Having this information in advance will accelerate negotiations. The scope of proposed contract change is reviewed as part of the selection process. If you anticipate having proposed contract or Scope of work changes, please request a Word version of the documents so you can track changes.

28. Is there a document that we can use for future AO system baseline capabilities?

The GeMS webpage shows current capabilities. In the near future we are replacing the GeMS laser to improve reliability and replacing the natural guide star sensors (the NGS2 project) to increase the sky coverage. We are also considering further work to better calibrate astrometric distortions. No additional roadmap of additional capabilities exists.

29. Do we still worry about laser clearing house, planes, and satellites?

We submit target lists in advance and we are provided specific windows of opportunity for each one. Others have used the system to essentially have an all-sky grid of opportunity windows; we envision such a mode might be useful in future LSST follow-up.

30. How much telescope time does Gemini plan to spend on complementing LSST?

This is currently undecided. One option is to allow users to determine the amount via submitting proposals through our current mechanisms. Another option is for Gemini to receive a mandate based on the Gemini Strategic Vision for 2020 and beyond. See the Strategic Vision Committee Charge.

31. How do I structure up-scopes and down-scopes?

The baseline proposal should address meeting the core capabilities, for budget and schedule, and include any additional capabilities you feel you can contractually commit to meeting. The baseline proposal is one that you would be primarily evaluated against.

Down-scope options would be those that delivered less than your baseline. They could include options that decreased the scope of the delivered instrument below the RFP core capabilities. Such down-scope would be considered providing they had little or no science impact and provided benefits such as a reduction in cost, schedule and/or risk to the project.

Up-scope options would be those that delivered more than your baseline. They could include additional capabilities that would increase the scope, cost, and/or schedule. An up-scope could range in scale from including a more expensive, higher capability component, to delivering two instruments. Primarily, up-scope options would need to fit within the project cost and schedule constraints.