



CTA-N Short Project On-site ICT and Power Concept Design – Internal Review Plan

Review date: Wednesday 23rd January 2019
Bologna

| | | |
|-----------------------------------|---------------------|-------------|
| Prepared by: | | |
| Names(s) and Signatures(s) | Organisation | Date |
| C. Crovari, D. Bristow | CTAO PO | 09-01-2019 |
| | | |
| Approved by: | | |
| Names(s) and Signatures(s) | Organisation | Date |
| Wolfgang Ansorge | CTAO PO | |
| Released by: | Organisation | Date |
| Names(s) and Signatures(s) | | |

Change Record

| Ver. | Date | Affected Section(s) | Change request No. | Reason/Initiation/Remarks |
|------|------------|--|--------------------|---------------------------|
| A1 | 08/11/2018 | | | Draft |
| | 09/11/2018 | Title, contents | | changes to content |
| | 15/11/2018 | Title, scope, documentation, participants, questions, agenda | | feedback from W.Ansorge |
| | 09/01/2019 | Date, Agenda | | Change to date |
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1 Scope of the Project Review Plan

The scope of the internal 'Project Review Plan' for the CTA-N On-site ICT and Power projects is the following:

- For the CTA-N On-site ICT:

to ensure all the technical information is captured for the CTA-N Short Project. The purpose of the internal review is to coordinate and finalize the technical documents that will be presented to the IAC as the inputs for the CTA-N 'Short Project' detailed design contract at the Observatorio del Roque de los Muchachos, on the island of La Palma in Spain.

- For the Power distribution system:

For CTA-N, a set of Requirements and a Conceptual Design were developed and Reviewed with two external Reviewers on February 2018. The Review finalized and was approved by the Project Manager, and the information is available in the link <https://indico.cta-observatory.org/event/1720/>. The purpose of the internal review is to ensure all the technical information is captured for the CTA-N Short Project.

The objective of the **On-Site ICT Internal Review**, is to collect feedback for:

- The On-site ICT Infrastructure, with focus in the On-site Networking Infrastructure.
- The power and data cable routing planning.

The objective of the **Power Review**, is to collect feedback for:

- The completeness of the information for the CTA-N Short Project detailed design

2 Contacts for the Project Review

- Carla Crovari, Power and Data Network Planning, CTAO.
carla.crovvari@cta-observatory.org, Ph: +49 6221 516 525
- David Bristow, Infrastructure Design Coordinator, CTAO.
david.bristow@cta-observatory.org, Ph: +49 6221 516 385

3 Documentation to be submitted for the Review

For the **On-Site ICT Internal Review**

- Requirement-Specifications document for the On-site Networking Infrastructure
- "Concept Design for CTA On-Site ICT Infrastructure" document, chapter 2 "The On-Site Networking Infrastructure"

For the **Power system Review**

- Requirement-Specifications document
- Power distribution system Concept design

4 Decision Making Authority

The CTAO Project Manager will have the Final Decision over the review panel.

5 Participants in the Review

The following staff will form the review working group:

- 1) Presenters
- 2) Review Panel
- 3) Observers

| Presenters | Name | Organisation |
|---|------------------------------|---------------------|
| Power and Data Network planning | Carla Crovari | CTAO |
| Designer of the Concept for the On-site ICT | Peter Wegner/ Rico Lindemann | CTAO |

| Review Panel | Name | Organisation |
|--|------------------|---------------------|
| Int. reviewer 1 System Engineer | Wolfgang Ansorge | CTAO |
| Int. reviewer 2 Safety Systems | Karl Tegel | CTAO |
| Int. reviewer 3 RAMS | George Pruteanu | CTAO |
| Chairperson of the Review Panel | Name | Organisation |
| Infrastructure Design Coordinator | David Bristow | CTAO |

| Observers | Name | Organisation |
|----------------------|------------------|---------------------|
| Interfaces Manager | Chiara Montanari | CTAO |
| Requirements Manager | Olivier Schnurr | CTAO |
| Risk Manager | Cesar Ocampo | CTAO |

| Decision Making Authority | Name | Organisation |
|----------------------------------|---------------|---------------------|
| Project Manager CTAO | Wolfgang Wild | CTAO |

Roles of the participants

- Presenters
Will be responsible for:
 - deliver the documentation to the panel chair according to the schedule in this document.
 - present the relevant information needed to comply with the objectives of the review.
 - comply with the agenda.
 - answer the questions and consider the feedback and recommendations that the review will give as outcome.
- Review panel members will be responsible for:

- Review the submitted documentation.
 - Identify problems or request explanations.
 - Attend the review.
 - Give feedback, by answering the questions presented in this document before or during the Review.
 - Participate in the elaboration of the review report, including recommendations; as requested and coordinated by the chairperson.
- Chairperson of the Review panel members:
 - ensure that the agenda is completed.
 - facilitate that the participants can give their feedback.
 - register the minutes and action points.
 - summarize the conclusions of the review panel, to the questions in Section 8. This discussion will take place in the review meeting (Agenda in Section 9).
 - ensure that the final review report is delivered.
- Observers
Will be able to participate in the meeting, making questions and giving feedback.

Additional observers may attend to the review with the permission of the review chairperson.

6 Review Venue

The Venue for the review will be Bologna. To be held on the 23rd January 2019.

7 Review schedule

| Date | Activity | Responsible | Status |
|------------|--|------------------|-------------|
| Nov. 2018 | Approve Review Plan/ appoint chairperson | WA, DB | comp |
| Nov. 2018 | Define/ Invite reviewers | WA, CC | comp |
| Nov. 2018 | Logistics: coordinate place for the Review | WA, CC | comp |
| 11.01.2019 | Prepare and submit documentation | PW, RL, CC | On-going |
| 18.01.2019 | Reviewers may submit questions to Contact persons | Review Panel | Not started |
| 23.01.2019 | Presenters prepare answers and presentation | PW, RL, CC | Not started |
| 23.01.2019 | Review day - presentation and discussion | all participants | Not-started |
| 11.02.2019 | Distribution of minutes, Action Items, and Final Review report | Chairperson | Not-started |



Questions to be answered by the Review Panel

For the On-Site ICT

1. Have the requirements for the On-site Network Infrastructure, concerning the On-site ICT, been defined? Are they complete? (Note: The On-site Network Infrastructure includes the physical cabling and the connections between telescopes and Common Array Elements with the Datacentre)
2. Have all interface requirements, concerning the On-site Network Infrastructure been captured? Is the operational environment taken into account?
3. Has the anticipated concept of maintenance been identified? Lifetime considered?
4. Are all the requirements verifiable?
5. Have RAM requirements been defined?
6. Have hazards been identified and ESH (Environment, Safety & Health) requirements been defined?
7. Does the Concept design comply with the On-site ICT requirements?
If not, please comment in what sense the Concept design may not comply, and to which requirement.
8. Do the interfaces for the network connections between the telescopes and Common Array Elements, and the Datacentre, presented in the Concept design, comply with the Requirements?
9. Do you foresee any additional element not identified in the present set of Requirements and Concept design, necessary to fulfill the scope of the Short Project? If so, please comment.
10. For On-Site Safety and Security elements, do you identify missing Requirements and or missing On-Site ICT elements?
10. Do you foresee for CTA South, any additional functionality for the network connections between Datacentre and Telescopes that should be considered in this stage?

For the Power System

9. Do you foresee any additional element not identified in the present set of Requirements and Concept design, necessary to fulfill the scope of the Short Project? If so, please comment.
10. For On-Site Safety and Security elements, do you identify missing Requirements and or missing elements?

8 Agenda for the Review meeting

| Time | Duration | Topic of the presentation | Presenter | Purpose |
|---------------|----------|---|-----------------------------|---|
| 14:00 -14:05 | 5 mins | Welcome by the Chairperson | David Bristow | Welcome |
| 14:05-15:00 | 55 min | On-site ICT concept (includes time for Discussion) | Peter Wegner/Rico Lindemann | to present the document distributed in advance, and answer the questions from the review panel |
| 15:00-15:30 | 30 mins | Requirement Specification document | Carla Crovari | to present the document distributed in advance, and answer the questions from the review panel |
| 15:30 - 16:00 | 30min | Panel discussion | David Bristow | The panel members share their answers to the questions included in the review plan (Section 8). The purpose is to collect feedback on the requirements, concept and interfaces and seek discussions for further improvements. |
| 16:00-16:30 | | Coffee break | | |
| 16:30-17:20 | 50 min | Requirement Specification document for the Power distribution for CTA-N Short Project | Carla Crovari | to present the document distributed in advance, and answer the questions from the review panel |
| 17:20 – 18:00 | 40 min | Panel discussion | Chair: David Bristow | |

9 Appendix: Material for the Review to be submitted by January 11th 2018.