

Invitation to Tender

Optical equipment for path between
Paranal (Antofagasta) and Santiago de Chile

**This English version is just a support version,
the official (mandatory) one is the Spanish
version.**

Prepared by:

REUNA
Canadá 239 Providencia
Santiago

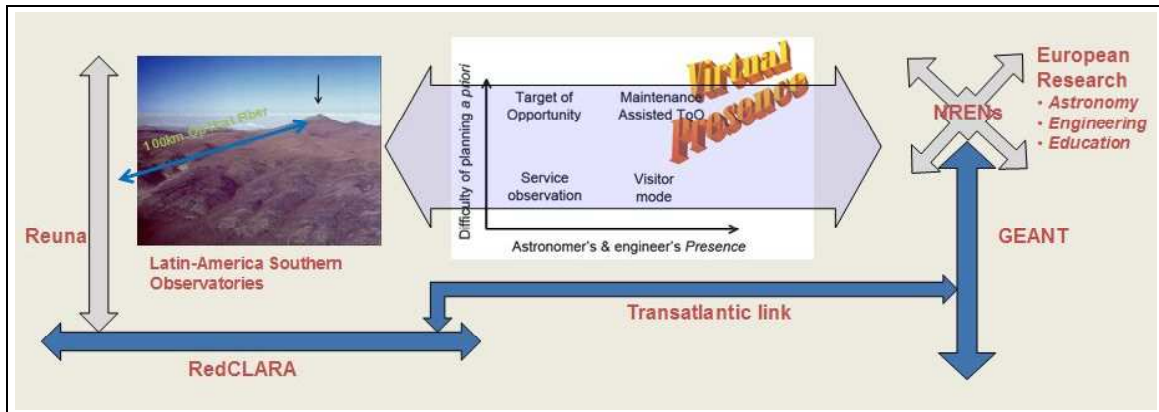


Index

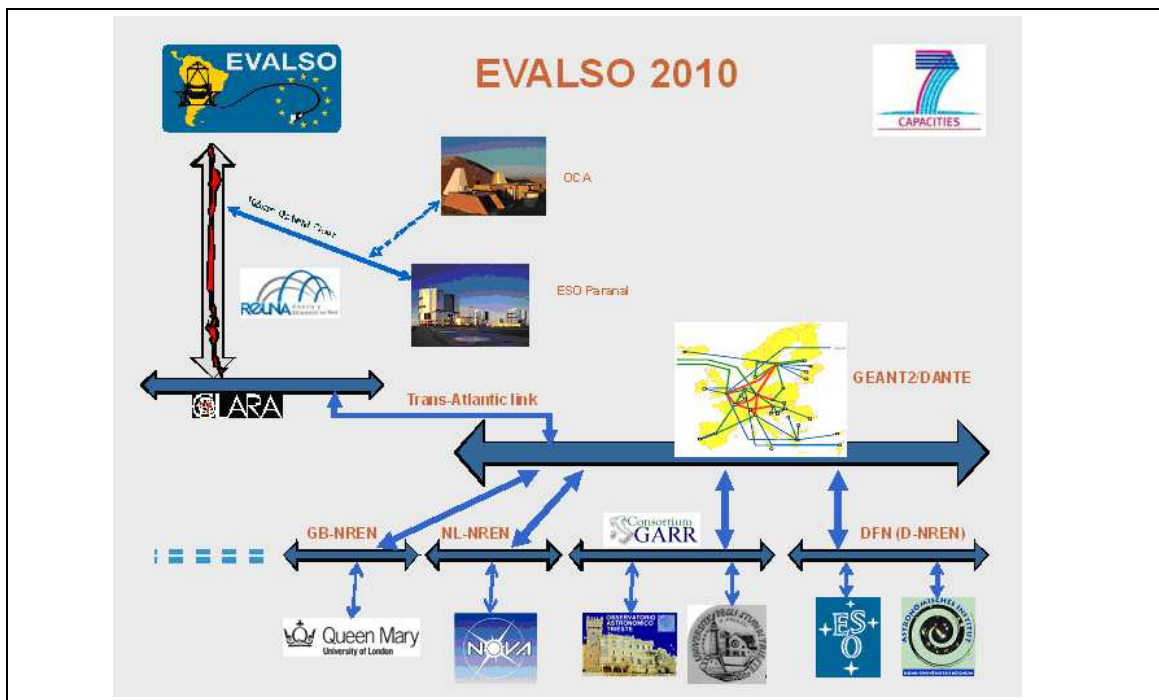
1. Background Information	3
2. EVALSO Infrastructure.....	5
3. Tender Strategy	6
3.1. General Facts	6
3.2. Technical Specifications.....	6
4. Commercial Conditions	9
4.1. General Conditions	9
4.2. Prices	10
4.3. Purchase Conditions	10
5. Instructions to the bidders	11
5.1. Proposal Structure	11
5.2. Information of the bidders	11
5.3. Commercial References.....	11
5.4. Deadline for Submission of Proposals	12
5.5. Questions.....	12
6. Evaluation Criteria.....	12
6.1. Mandatory Criteria.....	12
7. Annexes	13
7.1. Annex A – Lots requested.....	13
7.2. Annex B – EVALSO Link Infrastructure.....	13
7.3. Annex C – Diagram of equipment required.....	13
7.4. Annex D – Requirement fulfilment.....	13

1. Background Information

The EVALSO (Enabling Virtual Access to Latin-American Southern Observatories) Project aims to create a physical infrastructure (and the tools to exploit it) to efficiently connect the ESO Very Large Telescope VLT at Cerro Paranal and the RUB OCA Observatories at Cerro Armazones to Europe, more specifically to the European Research and Education network through its Latin American similes REUNA and CLARA.



The infrastructure will use international infrastructures created in the last years with the European Commission support (RedCLARA, GEANT) to provide European Research a competitive edge having faster access to the collected data and use the facilities in an ever more efficient way.



The EVALSO Project is an activity funded under the European Commission FP7 (Seventh Framework Program) on Research Infrastructures, Grant Agreement Nr. 212891.



Invitation to Tender, EVALSO Optical Equipment



EVALSO is run by a consortium made by a number of European and Latin America institutions:

- Università degli Studi di Trieste (Italy)
- European Organisation for Astronomical Research in the Southern Hemisphere
- Ruhr-Universität Bochum (Germany)
- Consortium GARR (Italy)
- Universiteit Leiden (The Netherlands)
- Istituto Nazionale di Astrofisica (Italy)
- Queen Mary and Westfield College, University of London (United Kingdom)
- Cooperación Latino Americana de Redes Avanzadas (Uruguay)
- Red Universitaria Nacional (Chile)
-

One of the key objectives of the EVALSO project is to improve the connectivity of two Astronomical Observatories in Chile:

- ESO's Cerro Paranal Observatory
- RUB's Observatorio Cerro Amazonas (OCA)

Both Observatories are located in the region south of Antofagasta. The connectivity to the world-wide research internet is currently based on a microwave link, but it is recognized that a much higher capacity, more reliable link will be required for the research purposes of the international scientific community in the area.

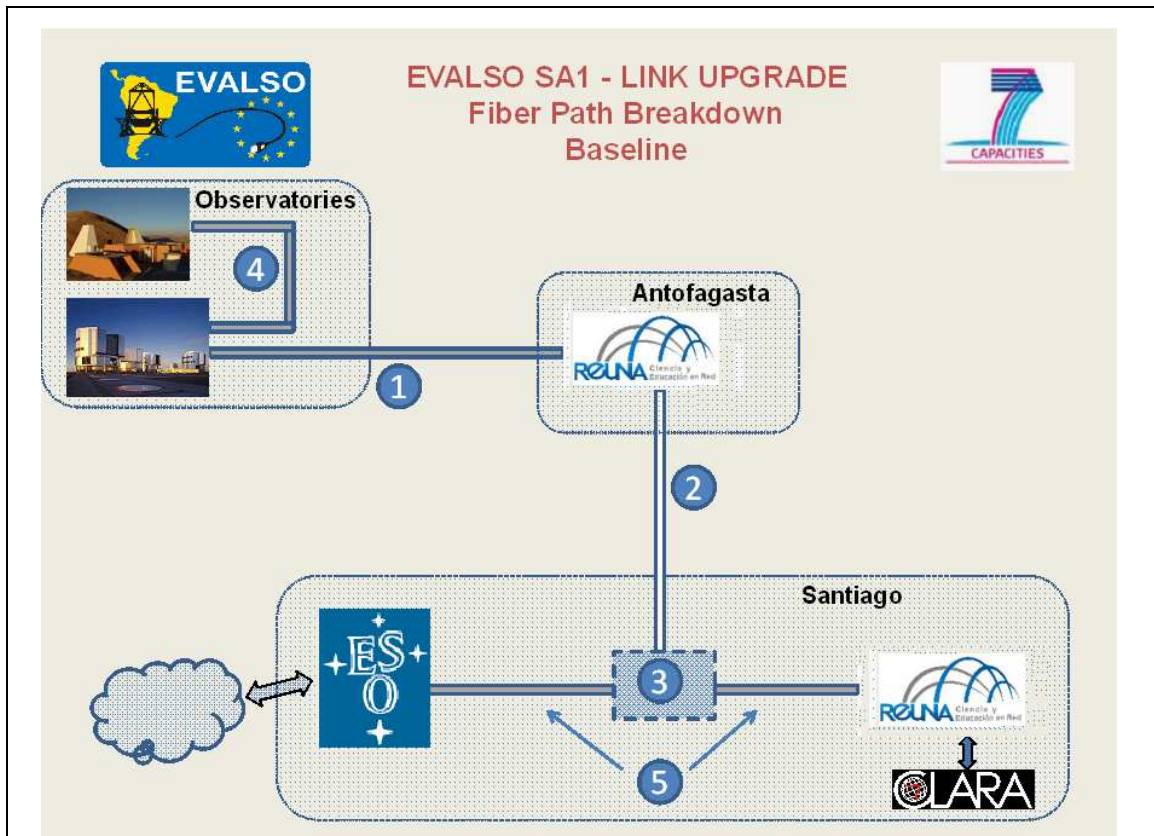
Because of the lack of infrastructure in the region, it has been decided to:

- Improve the communication infrastructure between the Observatories and the nearby existing infrastructures
- Provide higher bandwidth to connect to the Chilean research network (REUNA) and the international research backbones

Further information at <http://www.evalso.eu>

2. EVALSO Infrastructure

EVALSO infrastructure is composed by link paths and the equipment attached to this links. EVALSO already run the procurement for the link paths, where a summary of the result is shown in the following figure.



The identified items are:

- Item 1: Dark Fibers between ESO Paranal and REUNA Antofagasta
- Item 2: Fixed Wavelengths (one Lambda) between REUNA Antofagasta and the Santiago area (TELCO PoP)
- Item 3: Housing space for EVALSO equipment at the TELCO PoP (Santiago)
- Item 4: Dark Fibers between OCA and ESO Paranal
- Item 5: Dark fiber between TELCO PoP and the end points in Santiago, namely ESO/Vitacura and REUNA/Providencia

See details of each Item in Annex B – EVALSO Link Infrastructure

Thus this Invitation to Tender (ITT) comes to cover the equipment needed to bring in production the EVALSO project infrastructure.



Furthermore, this tender includes the needs of the EVALSO project as well as the needs of the Chilean research and education network REUNA, this means are required also equipment in two nodes along the path Antofagasta to Santiago, these are in Copiapó and La Serena, the details are explain in following points in this document.

3. Tender Strategy

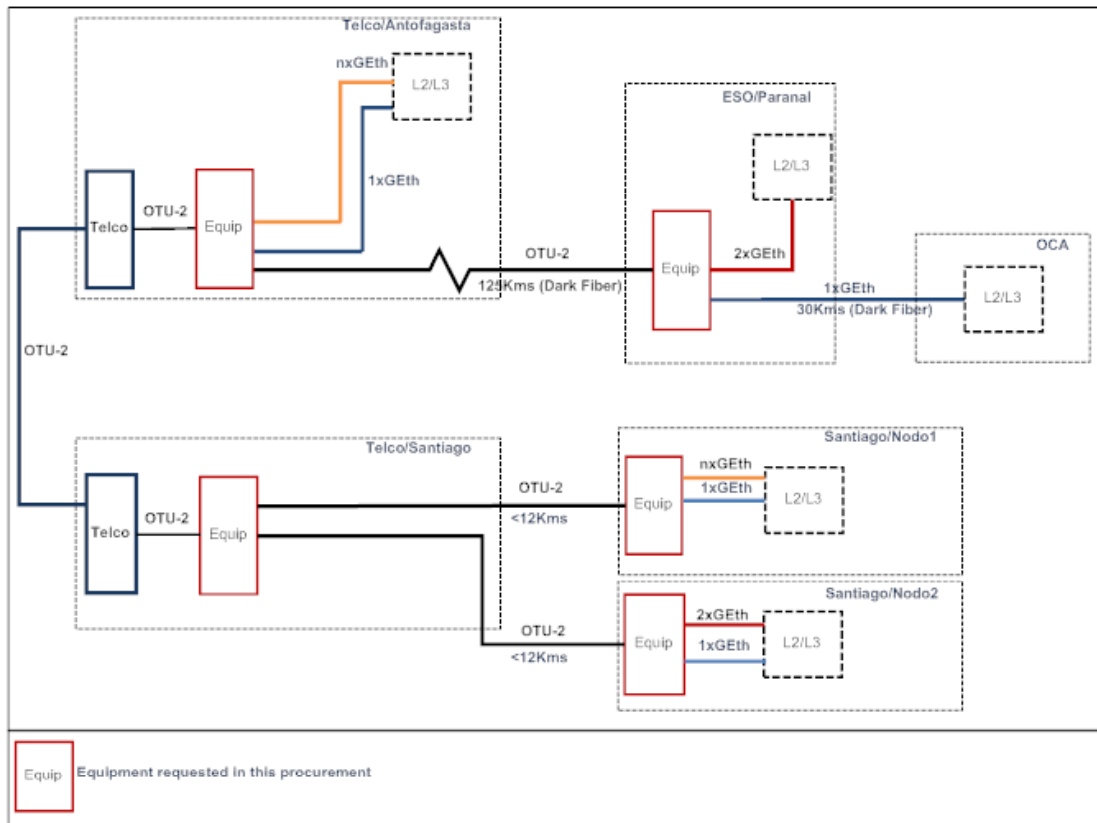
3.1. General Facts

REUNA is conducting this invitation to tender (ITT) on behalf of EVALSO project. The mechanism used is a Negotiated Tender, this means after the reception and analysis of the offers (that have to be complete and firm) and considering the possibilities offered, the application can be adjusted adding or cutting parts or requesting additional information. After this adjustment a final offer can be requested.

3.2. Technical Specifications

This ITT pursue the goal of the acquisition of equipment to put in operation the link infrastructure of EVALSO, composed by path of dark fibre and one wavelength (λ) OUT-2 OTN (10Gbps) from a third party.

Following diagram shows in a conceptual and summary manner the equipments required in this ITT.



The detail diagram with all the sites and amount of the interfaces needed is shown in Annex C – Diagram of equipment required.

3.2.1. Equipment requirement:

a) General considerations:

- The equipment involved in this ITT are only the DWDM type equipment, shown in the diagram in red box named Equip.
- The L3/L2 equipments are not part of this tender.
- The equipment need to be brand new, not refurbished.

b) Standard support:

- ITU-T G.694.1, G.709 (OTN) compliant
- Interface to client need to be Gigabit Ethernet (802.3ab and 802.3z), at 1300nm or 1500nm alternatives depending of the distance of link to connect.
- Jumbo frame support in the GEth interface (client)
- L2 transparent transport end to end (802.1Q support).
- High availability equipment
- Electrical power –48V DC and optional 220V AC
- 19" rack mountable

- SNMP capable (list MIBs available)
- c) Management support:
- CLI support for management (SSH, Telnet)
 - Management platform, ideally supported in open standards (html, java, etc)
 - In band and out band management support
- d) Other information requested
- Size of each equipment (rack units) in each node
 - Heat dissipation (BTU) and electrical power consumption for equipment.
 - List the other DWDM vendors the provider has compatibility benchmarks
- e) Future upgrade considerations:
- At this stage the DWDM equipment need to transport just one lambda, so the proposal has to be dimensioned for one lambda. But it is absolutely desirable the solution proposed can scale, in case is needed in the future, through additional interfaces or equipment to a full DWDM platform.
 - Describe technically how the solution proposed scale in term of support more DWDM lambdas to the network side.
 - Describe technically how the solution proposed scale in term of supporting more GigaEthernet interface to the client side.
 - Include in the proposal a technical description of the equipment needed to upgrade the solution proposed to a 4 lambdas DWDM system between two equipment, take the node Telco/Santiago and REUNA/Providencia for this description.

3.2.2. Services requirement:

- a) Installation Service:
- The proposal need to include the installation support service.
 - The equipment will be installed in 4 cities, Antofagasta, Copiapó, La Serena and Santiago.
 - The proposal need to include in a separated item the delivery of the equipment to each city.
 - All the logistics aspect for the delivery will be agreed between the equipment provider and REUNA.
- b) Guarantee and Maintenance Support Service:
- Describe the guarantee service offered. It is needed 5 year of guarantee.

- If apply, specify software upgrade licence mechanism included in the proposal.
 - Describe the Hardware and Software maintenance service offered, including at least procedure and Maximum time of failure reparation.
 - A Reposition time less than 24 hours is needed.
 - Quote the Maintenance service in a 5x8 and 7x24 mode.
- c) Training activity:
- A Training activity is needed.
 - Consider a course for 8 people in REUNA offices, Canadá 239 Providencia Santiago. Language, ideally Spanish.
 - The course has to be focus in know the equipment platform, how to configure and manage them and main consideration to troubleshoot a common situation.

4. Commercial Conditions

4.1. General Conditions

- 4.1.1. This tender will follow the negotiated tender procedure, according to financial rules of the European Commission, Article 241(1), point (b) of Article 243(1) and point (b) of Article 245(1).
- 4.1.2. REUNA reserves the right of assign this tender in a partial, total or not at all to any bidder.
- 4.1.3. The expenditures related to the preparation and sending of the proposal, the meeting attend or any other cost related to the participation of the bidder in this ITT, included the contract negotiation costs, are from exclusive charge of the bidder.
- 4.1.4. All the offer has to have a valid period of 90 days after the date of presentation of the proposal. The bidder who wins the tender, if any, must maintain the offer valid for 60 more days after the date of notification of the adjudication.
- 4.1.5. The bidder must demonstrate finance solvency that allow to conclude it will be in condition to maintain a permanent supply of updates, pieces and parts over all the lifetime of the equipment.
- 4.1.6. The bidder must demonstrate it has in production at least three networks of different clients using similar equipments offered in its proposal, in any part of the world. Each of this cases need to have an equipment production period of no less than six months.
- 4.1.7. The bidder must guarantee the seriousness of the offer through a performance bond, which value will correspond to a 30% of the amount of the final order.

4.2. Prices

The offer has to include the prices of:

- 4.2.1. Each equipment and its component. Software services, if any, has to be identified also. There are eight equipment: Paranal, Antofagasta, Telco/Santiago, ESO/Vitacura, REUNA/Providencia, Telco/Copiapo, Telco/La Serena and Santiago/Node3 (details in Annex C – Diagram of equipment required).
- 4.2.2. The equipment delivered in Santiago de Chile.
- 4.2.3. The transfer of the equipments to the cities of Antofagasta, Copiapó and La Serena, in schedule to be agreed between REUNA and the bidder. Transfer cost has to be separated by node.
- 4.2.4. Delivery date of the equipment from the date of reception of the purchase order issued by the CONTRACTOR.
- 4.2.5. The equipment installation must include qualify and experienced staff, in the areas related with the services to be delivered by this tender.
- 4.2.6. Equipment installation in the rack specified by the CONTRACTOR or, if the equipment has its own rack, installation of the rack of the equipment provider. Environment conditions (space, electric power, etc.) to install the equipment and racks are responsibility of the CLIENT.
- 4.2.7. The provision of optical and power cables needed for the equipment interconnection.
- 4.2.8. Test for the correct acceptance of the equipments.
- 4.2.9. Maintenance and Training activity quotation as requested in this ITT.

4.3. Purchase Conditions

- 4.3.1. Considering that part of the funds of this tender is provided by EVALSO, funded by the 7^o European Commission Frame Program, it will be necessary to wait for the approval of the European Commission to sign the Purchase contract and to put the respective purchase order.
- 4.3.2. The payment of the equipment will be a cash payment against the installation in conformance of the equipment and after the process has been approved by the European Commission.
- 4.3.3. Even the dates of delivery and installation of the equipment will be negotiated in the meeting, it is expected that the bidders can deliver the equipment in the less time available, ideally less than 45 calendar days after the reception of the purchase order and an installation period no more than 30 calendar days. Its must specify the compensation is case of not compliance.
- 4.3.4. Given that the funds of EVALSO project comes from different funding sources, REUNA can request some equipment be billed in separate invoices, for what the suppliers should be willing to charge the agreed amount in one or more bill.

- 4.3.5. The offers need to specify the guarantee period conditions, the way the offer conditions will be accomplished and the compensations in case of not compliance.
- 4.3.6. The Provider has to describe in its technical proposal the specifications along with any other detail that contribute to bring a service of quality during and after the purchase process. In the evaluation will be considered all the additional information provided related to the service type, software upgrade and documentations, upgrade versions, in site and remote support service, preventive maintenance and any other aspect that add value to the baseline proposal requested.

5. Instructions to the bidders

5.1. Proposal Structure

The proposal can be delivered in Spanish or English, and has to have the following structure:

- 5.1.1. General Presentation
- 5.1.2. Price information according lots mentioned in Annex A – Lots requested
- 5.1.3. Full description of the offer solution, including at least:
 - Hardware, Software and Services as requested in point 3.2 of this ITT document and any other information that helps to better understand the proposal.
- 5.1.4. Acceptance and compliance of the commercial conditions as requested in point 4 of this ITT document.
- 5.1.5. Annex files as requested in point 4.2 and Annex D – Requirement fulfilment of this ITT document.

5.2. Information of the bidders

- 5.2.1. The last audited financial statements
- 5.2.2. Short description of the finance structure, including main partners (less than 100 words)
- 5.2.3. Public available details of any process of restructuring/refinancing that would affect the capacity of the bidder to develop the services and the provision of pieces and parts as requested in this ITT (less than 200 words)

5.3. Commercial References

- 5.3.1. List of three commercial references that the bidder present as evidence of the technical and operational capacity of and adequate and on time implementation of this matter.
- 5.3.2. For each reference, the name and contact information of a person that REUNA can contact to have its impression of the bidder capacity.

5.4. Deadline for Submission of Proposals

- The bidder has to deliver 1 physical original copy of the proposal to REUNA, Canadá 239 Providencia Santiago, which has to be received no later than 19:00 GMT, of day Friday 05th of March of 2010.
- The bidder has to include a digital copy dully firmed, in pdf format and the excel spreadsheets in xls format, all in a CD attached to the physical original copy of the proposal.
- If the bidder wants can send a digital copy of the proposal to the e-mail evalso-equipos@reuna.cl

5.5. Questions

- Technical and administrative questions can be made only by e-mail, to evalso-equipos@reuna.cl
- Questions can be made in Spanish preferably but English is well accepted.
- Answers to the questions will be publish in a private web site accessible to all the bidders participating in this ITT.
- Time to ask question is at the day of delivery the proposal.

6. Evaluation Criteria

6.1. Mandatory Criteria

The proposal will be evaluated according the following criteria:

- 6.1.1. Compliance to the technical and commercial requirements.
- 6.1.2. Capacity of the offered solution and the possibility to scale it without investing in a complete new solution.
- 6.1.3. Total cost of the solution evaluated along 5 years.
- 6.1.4. Equipment delivery and installation.
- 6.1.5. Capacity of the bidder to guarantee a high quality maintenance service allowing the equipments works in perfect conditions 99,95% of the time.
- 6.1.6. Maximum time of failure reparation.
- 6.1.7. Disposal of the bidder to develop innovative mechanism of collaboration with REUNA and EVALSO partners, considering they have as mission to operate a network in the technological state of the art for the academic and research community.
- 6.1.8. Technical alternatives and additional costs to increase the installed capacities.
- 6.1.9. Finance and experience strength of the bidder.

7. Annexes

7.1. Annex A – Lots requested

Lot #	Description	Price
1	Equipment ¹ in nodes: <ul style="list-style-type: none">• ESO/Paranal• Telco/Antofagasta• Telco/Santiago• Santiago/Nodo1• Santiago/Nodo2	
2	Equipment ¹ in nodes: <ul style="list-style-type: none">• Telco/Copiapó• Telco/La Serena	
3	Equipment ¹ in node: <ul style="list-style-type: none">• Santiago/Nodo3	
4	Installation Service	
5	Guarantee and Maintenance Service	
6	Training Activity	

Include in an excel file the prices of each equipment as requested in point 4.2. The configuration quoted has to be complete, including all the parts and software needed to have a fully operational solution.

7.2. Annex B – EVALSO Link Infrastructure

See document named: Annex B EVALSO Link Infrastructure

7.3. Annex C – Diagram of equipment required

See document named: Annex C Diagram of equipment required

7.4. Annex D – Requirement fulfilment

Fill an excel file with all the technical specification of the equipment including all the requested in points 3.2.1 and considering the information provided in Annex B – EVALSO Link Infrastructure and Annex C – Diagram of equipment required.

¹ According diagram shown in Annex C