


CEDEFOP

 European Centre for the Development
of Vocational Training

Area Resources

Finance and Procurement Service

 Thessaloniki, 06/06/2012
RS/PRO/YSIRAK/2012/0324

OPEN INVITATION TO TENDER

AO/RES/ASAIN/Recover-Phase 2/009/2012

‘Audio-Visual & Conference Infrastructures Systems’ Delivery, Installation, & Supporting Services’

Ref.: contract notice – OJ 2012/S 106-175985 of 06/06/2012

Dear Sir/Madam,

We thank you for the interest you have shown in this tender.

The purpose of this tender and additional information necessary to present a tender can be found in the attached Tender Specifications and in the respective Technical Specifications. Please note the following important points concerning the submission of a tender and its implications.

1. Tenders should be submitted preferably in English, but in any case in one (or in any) of the official languages of the European Union.
2. Tenders may be submitted exclusively in one of the following ways:

(a) by post to be dispatched not later than **the date and time specified in the timetable in point 8 below**, in which case the evidence shall be constituted by the date of dispatch on the postmark or the date of the deposit slip, to the following post address of Cedefop:

**European Centre for the Development of Vocational Training (Cedefop),
Procurement Service, Attention of Mr G. Paraskevaidis
PO Box 22 427
GR – 55102 Thessaloniki, Greece**

Important:

Tenderers shall inform Cedefop by e-mail (c4t-services@cedefop.europa.eu) or fax (+30 2310 490028)

- ✓ that they have submitted an offer in time, and
- ✓ that they request Cedefop to confirm receipt of the e-mail or fax.

Do not attach your offer to any of the above information e-mail or fax.

OR

(b1) by courier service to be dispatched not later than **the date and time specified in the timetable in point 8 below**, in which case the evidence shall be constituted by the date of dispatch to the address below or the date of the deposit slip,

OR

(b2) delivered by hand not later than **the date and time specified in the timetable in point 8 below**, in which case a receipt must be obtained as proof of submission, signed and dated by the official in the above mentioned Service who took delivery,

to the following address (for points **(b1)** and **(b2)**):

**European Centre for the Development of Vocational Training (Cedefop),
Procurement Service, Attention of Mr G. Paraskevaidis
123, Europe Str, GR-57001 Thessaloniki-Pylea,
Tel: +30 2310 490111 / 490 064**

Please note that Cedefop is open from 09h00 to 17h00, Monday to Friday. It is closed on Saturday, Sunday and Cedefop holidays.

3. Tenders must be submitted strictly adhering to the following.

Tenders must be submitted in a sealed envelope itself enclosed within a second sealed envelope. If self-adhesive envelopes are used, they must be sealed with adhesive tape and the sender must sign across this tape.

The **outer envelope**, addressed simply to Cedefop (address depending on the means of submission, see point 2 above), should only bear additionally **the name and address** of the sender.

The **inner envelope**, addressed to the Procurement Service as indicated under point 2 above, must bear a self-adhesive label with the indication **“Open Invitation to tender – Not to be opened by the internal mail service”** and all the necessary information, as shown below:

OPEN INVITATION TO TENDER AO/RES/ASAIN/Recover-Phase 2/009/2012 <i>‘Audio-Visual & Conference Infrastructures Systems’ Delivery, Installation, & Supporting Services’</i> Name of tenderer: NOT TO BE OPENED BY THE INTERNAL MAIL SERVICE

The inner envelope must also contain three sealed envelopes, namely, Envelope A – “Supporting Documents”, Envelope B – “Technical Proposal” and Envelope C – “Financial Proposal”. The content of each of these three envelopes is described in point 6 of the attached tender specifications.

4. Tenderers must ensure that their tenders are signed by an authorised representative and that tenders are legible. It is mandatory to include in the offer a cover letter, signed by the person/s that is/are authorised to sign the contract in case of contract award, stating that the tenderer accepts in full and without restriction the requirements of these Tender Specifications, and the Special and General conditions governing this contract as the sole basis of this tendering procedure (see also point 1 of the Tender Specifications).
5. Submission of a tender implies acceptance of all the terms and conditions set out in this invitation to tender, in the specifications and in the draft contract and, where appropriate, waiver of the tenderer’s own general or specific terms and conditions. It is binding on the tenderer to whom the contract is awarded for the duration of the contract.
6. The opening of tenders will take place at Cedefop on **the date and time specified in the timetable in point 8 below**. Each tenderer may be represented at the opening of tenders by one person. The name of the person attending the opening must be notified in writing by fax (Fax No +30 2310 490 028) or by e-mail (C4T-services@cedefop.europa.eu) at least two working days prior to the opening session.
7. Contacts between the contracting authority (Cedefop) and tenderers are prohibited throughout the procedure save in exceptional circumstances and under the following conditions only:

7.1 Contacts before the final date for submission of tenders:

- At the request of the tenderer, the Cedefop Procurement Service may provide additional information solely for the purpose of clarifying the tender documents. Any request for additional information must be made in writing by fax (fax No +30 2310 490 028) or by e-mail (C4T-services@cedefop.europa.eu).

Requests for additional information/clarification (if any) from potential tenders should preferably be written in English and should be received by the date and time specified in the timetable in point 8 below. No such requests will be processed after that date.

- Cedefop may, on its own initiative, inform interested parties of any error, inaccuracy, omission or any other clerical error in the text of the call for tenders.

The Answers/Clarifications of Cedefop to the requests for additional information/clarification of the tenderers, **including that referred to above, will be published on Cedefop's website** under the same link where this Open Tender Procedure is announced (<http://www.cedefop.europa.eu/EN/working-with-us/public-procurements/calls-for-tenders.aspx>). **Tenderers must ensure that they visit the site regularly for updates up to the closing date for receipt of tenders.**

7.2 Contacts after the final date for submission of tenders and before opening:

- Tenderers should not contact the contracting authority (i.e. Cedefop) on their own initiative after the final date for submission of tenders.
- Tenderers are not allowed to amend their offers, e.g. by completing the documents they sent, replacing them with amended ones or sending new documents initially not included in the tender, as this may lead to rejection of the tender at a later stage. Any such need for additional information/document identified by the Evaluation Committee during the evaluation process will be notified to the tenderer concerned at Cedefop's initiative, with a reasonable deadline for response (see also the provisions under the heading below).

7.3 Contacts after the opening of tenders:

- Tenderers should not contact Cedefop on their own initiative at that stage.
- If clarification on compliance with the Eligibility and/or Selection Criteria is required or if obvious clerical errors in the tender need to be corrected, Cedefop may contact the tenderer(s) in writing to obtain further clarification or documents on specific points of the tender or to correct obvious clerical errors.
- If the necessary information and/or supporting documents for the assessment of an award criterion are missing, these may not be requested as clarification if this might alter the proposal. Any requests for clarification in that regard should not lead to amendment of the terms of the tender. Tenderers must not modify their tender or add any new elements to it. The reply must therefore make clear reference to the relevant information already present in the file. This will serve solely the purpose of providing the Evaluation Committee with clarification regarding the technical proposal, provided the terms of the tender are not modified as a result.
- In regards to possible clarifications on obvious clerical errors in the Financial Offer, tenderers must not add any new prices, but only explain the quotation on the basis of elements and prices already present in the offer. In case a tenderer alters his financial offer during a clarification (beyond the correction of any obvious clerical/calculation errors), this offer will be automatically rejected.
- Tenderers should be prepared to reply to such requests for clarification within a short reasonable deadline specified in the request for clarification.

8. Timetable:

	DATE	TIME
Deadline for request for any clarifications from the Contracting Authority (Cedefop)	06/07/2012	17.00 h
Last date on which clarifications are issued by Cedefop	as soon as possible	N/A
Deadline for submission of tenders (hand delivered)	17/07/2012	17.00h
Deadline for submission of tenders by post / courier	17/07/2012	N/A
Validity of the tenders	17/01/2013	N/A
Tender opening session	31/07/2012	11.00h

9. Tenderers must maintain the validity of their tender for at least 6 months following the deadline for submission of tenders.

In exceptional cases, before the period of validity expires, Cedefop may ask the tenderers to extend the period for a specific number of days, which may not exceed 40.

The selected tenderer must maintain his tender for a further period of 60 days from the date of notification that his tender has been recommended for the award of the contract. The further period of 60 days is added to the initial period of 6 months irrespective of the date of notification.

10. All costs incurred in preparing and submitting tenders should be borne by the tenderers.
11. Up to the point of signature, the contracting authority may either abandon the procurement or cancel the award procedure, without the candidates or tenderers being entitled to claim any compensation. If such decision is taken, the tenderers will be notified accordingly.
12. This invitation to tender is in no way binding on Cedefop. Cedefop's contractual obligation commences only upon the signature of an Order or Specific Contract under the Framework Contract, so signature of the Framework Contract alone does not commit Cedefop to order.
13. Evaluating your tender and your possible subsequent replies to questions in accordance with the specifications of the invitation to tender, will involve the recording and processing of personal data (such as your name, address and CV). Unless indicated otherwise, such personal data will be processed by Cedefop's Finance and Procurement Service solely for that purpose and pursuant to Regulation (EC) No 45/2001 on the protection of individuals with regard to the processing of data by the Union institutions and bodies and on the free movement of such data. Details concerning the processing of your personal data are available in the privacy statement at: http://ec.europa.eu/dataprotectionofficer/privacystatement_publicprocurement_en.pdf.

You have the right of recourse at any time to the European Data Protection Supervisor for matters relating to the processing of your personal data.

14. Your personal data (name, given name if natural person, address, legal form, registration number and name and given name of the persons with powers of representation, decision-making or control, if legal persons) may be registered in the Early Warning System (EWS) only, or both in the EWS and Central Exclusion Database (CED) by the Accounting Officer of the Commission, should you be in one of the situations mentioned in:
- the Commission Decision 2008/969 of 16.12.2008 on the Early Warning System (for more information see the Privacy Statement on http://ec.europa.eu/budget/info_contract/legal_entities_en.htm), or
 - the Commission Regulation 2008/1302 of 17.12.2008 on the Central Exclusion Database (for more information see the Privacy Statement on http://ec.europa.eu/budget/library/sound_fin_mgt/privacy_statement_ced_en.pdf).

15. All tenderers will be informed in writing of the results of the tender procedure.

Yours sincerely,

G. Paraskevaidis
Head of Finance and Procurement

Attached: Tender Specifications

OPEN INVITATION TO TENDER

AO/RES/ASAIN/Recover-Phase 2/009/2012

***‘Audio-Visual & Conference Infrastructures Systems’ Delivery,
Installation, & Supporting Services’***

Tender Specifications

Table of contents

<i>Introduction to Cedefop: Europe's agency for training policy</i>	<i>7</i>
<i>1. Overview of this tender procedure.....</i>	<i>9</i>
1.1 Description and type of the contract	9
1.2 Place of delivery and performance	9
1.3 Division into lots	9
1.4 Variants.....	9
1.5 Value or quantity of purchase.....	9
1.6 Duration of the contract	9
1.7 Main terms of financing and payment	10
<i>2. Technical Specifications</i>	<i>11</i>
<i>3. Specific information concerning participation to this tender</i>	<i>46</i>
3.1. Exclusion criteria	46
3.2. Selection criteria.....	46
3.2.1. Economic and Financial capacity	46
3.2.2. Technical and professional capacity	47
3.3. Legal Position	48
<i>4. Additional information concerning participation to this tender</i>	<i>48</i>
4.1. Joint Offers/ Groupings (Consortia)	48
4.2. Subcontracting/Subcontractors	49
<i>5. Award of the contract.....</i>	<i>50</i>
5.1. Technical evaluation	50
5.2. Technical proposal	51
5.3. Financial evaluation	53
5.3.1. Evaluation of abnormally low prices.....	53
5.3.2. Financially unacceptable tenders.....	53
5.4. Financial proposal.....	54
5.4.1. Information concerning price	54
<i>6. Information on presentation and content of tender</i>	<i>55</i>
6.1 Envelope A - Supporting documents	55
6.2 Envelope B – Technical proposal.....	55
6.3 Envelope C – Financial proposal	55

ANNEXES:

Annex A	Contract Notice
Annex B	Draft Contract
Annex C	Declaration on Exclusion Criteria
Annex D	Legal entity form
Annex E	Financial Identification Form
Annex F	Check list of mandatory documents
Annex G	Questionnaires 1-4
Annex H	Financial Proposal
Annex I	Power of Attorney (Models 1 and 2)
Annex J	Model of Letter of Intent for Subcontractor/s
Annex K	Technical Specifications & Compliance Evaluation Grid
Annex L	Technical Proposal - Graded Requirements
Annex M	Glossary of Terms

Introduction to Cedefop: Europe's agency for training policy

Source: <http://www.cedefop.europa.eu/EN/about-cedefop.aspx>

To provide people with the skills they need, vocational education and training systems (VET) need to adapt quickly to changing demands. European VET policy's central aim is to promote excellence through VET and to make it both an attractive learning option for the brightest and best young people and adults and an effective way of helping those with low levels of qualification to develop their skills.

Cedefop (the European Centre for the Development of Vocational Training), founded in 1975 and based in Greece since 1995, is a European Union (EU) agency. It provides the European Commission, Member States ⁽¹⁾ and social partners with insights into trends concerning VET and offers advice on how European VET policy should meet the challenges Europe and its citizens face.

The evidence Cedefop provides comes from its:

- monitoring of VET policy developments and reforms in Member States;
- comparative research and analyses, including anticipation of future skill supply and demand;
- forums for debates among policy-makers, social partners, researchers and practitioners on the best ways to tackle the challenges Europe faces.

CEDEFOP'S OBJECTIVE AND PRIORITIES FOR 2012-14

Cedefop's activities are guided by its strategic objective and medium-term priorities for 2012-14. Cedefop's strategic objective is to contribute to designing and implementing policies for attractive VET that promotes excellence and social inclusion and to strengthening European cooperation in developing, implementing and analysing European VET policy. This objective is supported by three priorities:

- **Supporting modernisation of VET systems**

Modern VET systems must be relevant to individual and labour market needs. They should take into account learning acquired in different ways (for example through work experience) and at different times, and allow people to move between countries and sectors.

Member States decide national VET policies and Cedefop monitors and reports on the reforms and changes they make to their systems. Cedefop also works to improve international VET statistics.

European cooperation in VET, led by the European Commission working with Member States and the social partners, has agreed common objectives. As part of this cooperation, Cedefop has helped to develop, and is now working to implement, common European tools and principles which aim to make it easier both to work and study abroad and to move between different parts of a national education and training system (for example between general and vocational education).

- **Careers and transitions – Continuing VET, adult and work-based learning**

Today, people are likely to change jobs more often. Cedefop is looking at how continuing training and work-based learning for adults can help people to manage their careers better and improve their job prospects. Cedefop is also examining how work-based learning for adults can help enterprises to deal with technological change, generate innovation and increase competitiveness.

⁽¹⁾ Cedefop also works with Iceland and Norway.

New demands are also being made of VET teachers and trainers, and Cedefop is looking at their changing roles and their skill and learning needs.

- **Analysing skills needs to inform VET provision**

Europe's growth and competitiveness will be held back if people's skills do not meet job requirements. Unemployment currently coexists with skill shortages. Understanding and anticipating the skills required helps to ensure that training meets labour market needs. It helps to promote a better match between the potential of individuals and the requirements of jobs.

Cedefop's skill needs analysis provides insights into the trends that influence skill supply and demand and the imbalances that may arise both in the EU and individual Member States. Cedefop is also finding out more about sectoral and occupational developments, such as the demand for 'green' skills for sustainable growth and, as the population ages, the potential for job creation and the impact of the skill needs of the 'silver' economy.

CEDEFOP'S INFORMATION

Cedefop shares its expertise through its publications, networks, conferences, seminars and web portal www.cedefop.europa.eu. The web portal provides news on Cedefop's major themes 'Identifying skills needs', 'Understanding qualifications', 'Analysing policy' and 'Developing lifelong learning'. All Cedefop publications are available for download. Cedefop hosts and organises conferences and events throughout the year. Cedefop also coordinates the study visits programme for the European Commission. Study visits are short-term visits of three to five days for a small group of 10 to 15 specialists to examine a particular aspect of lifelong learning.

In addition to its web portal www.cedefop.europa.eu, Cedefop's work can be followed on Facebook at www.facebook.com/cedefop and Twitter at www.twitter.com/cedefop.

1. Overview of this tender procedure

In submitting a tender in response to this tender procedure, tenderers accept in full and without restriction the requirements of these Tender Specifications, and the Special and General conditions governing this contract as the sole basis of this tendering procedure, whatever their own conditions of sale and terms of business may be, which they hereby waive. No account can be taken of any reservation or disclaimer expressed in the tender as regards the tender dossier's Tender Conditions and Specifications and the Contract's Special and General Conditions. If necessary, clarification may be requested by potential tenderers concerned while the tender submission phase is open – see point 7 of the Invitation to tender. Any reservation or disclaimer may result in the rejection of the tender without further evaluation on the grounds that it does not comply with the conditions of the Tender Dossier.

Tenderers are expected to examine carefully and comply with all instructions, forms, provisions and specifications contained in this tender dossier. Failure to submit Technical and Financial Proposals containing all the required information and documentation may lead to the rejection of the tender.

1.1 Description and type of the contract

a) Title of the contract:

'Audio-Visual & Conference Infrastructures Systems' Delivery, Installation, & Supporting Services'

b) Short description of content of this contract:

The purpose of this contract is the upgrade of the audio, video and lighting installations of Cedefop's conference rooms (Europa, Montessori and Rousseau) and other meeting rooms.

The contract will also cover the necessary preventive and corrective maintenance and on demand technical assistance for of all the installed equipment and systems.

c) Type of contract: Cedefop will offer a single Supply Contract to the selected tenderer whereby the required supplies and services will be provided by the Contractor upon signature of the Contract throughout its validity period.

1.2 Place of delivery and performance

Cedefop's premises, 123 Europe str., Pylea, Thessaloniki, Greece

1.3 Division into lots

This tender procedure is not divided into lots.

1.4 Variants

Tenderers may not offer variant solutions to what is requested in the technical specifications. Cedefop will disregard any variants described in a tender, and further reserves the right to reject such tenders without further evaluation on the grounds that they do not comply with the tender specifications.

1.5 Value or quantity of purchase

The estimated maximum budget for the required upgrade of the audio, video and lighting systems of Cedefop conference rooms (supply, and installation of equipment) and the provision of the ancillary services described in this call for tenders is 320,000 EUR (without VAT).

1.6 Duration of the contract

The contract shall enter into force on the date of signature of the last contracting party (i.e. Cedefop), and shall have a duration of four (4) years (1 year for delivery and installation, 1 year min. for warranty maintenance after the completion and the acceptance of the audio, video and lighting systems and their installation + 2 years max. for the provision of preventive and corrective maintenance). If the tenderer offers more than one year warranty, then the remaining 2 years for the provision of preventive and corrective maintenance will be detracted accordingly.

1.7 Main terms of financing and payment

Payments will be made within 30 days of submission of invoices and at the conditions set out in the draft contract. The completed deliveries and associated services / tasks should be invoiced to Cedefop after prior acceptance by the Facilities Service of Cedefop.

Cedefop shall make payments to the contractor as follows:

- > for **Europa** - after 100% completion and partial acceptance of supply, provision and installation of hardware, software, data network, equipment enclosures, cable containment, signal cabling and additions to existing mains power distribution installation of the systems, training and documentation);
- > for **Montessori and Rousseau** - upon 100% completion and acceptance of supply, installation of hardware, software, data network, equipment enclosures, cable containment, signal cabling and additions to existing mains power distribution installation of the systems, training, documentation;
- > for **Library on 1st floor** (A' ISOGEIO - 0.A.15), **Meeting Room on 1st floor** (A' ISOGEIO - O.A.40), **Personnel Room on 2nd floor** (B' ISOGEIO - 1.B.24) upon 100% completion and acceptance of supply, installation of hardware, software, data network, equipment enclosures, cable containment, signal cabling and additions to existing mains power distribution installation of the systems, training, documentation;
- > for **preventive and corrective maintenance** - at the end of each year upon completion of the preventive and corrective maintenance (incl. spare parts, if any).

2. Technical Specifications

SECTION 1

1. GENERAL TERMS

1.1. Order of Precedence and content of tender

The following chapters describe the technical and functional requirements and specifications for the equipment components and solutions for revamping and upgrading Cedefop's audio-visual and conference infrastructures.

- 1.1.1 Functional requirements apply before specific technical requirements, and the overall system requirements apply before the requirements for single components. The technical and/or functional requirements supersede any drawing or lists of material. In case of a difference between drawings and specifications, the specifications shall govern.
- 1.1.2 The tenderer shall be fully responsible for ensuring that the offered equipment comply with the described functional requirements and applicable regulations. Specification documents and drawings herein are detailed only to the extent necessary to illustrate design intent, concepts, principal pieces of equipment and main signal flow within the systems. The objective of the tenderer shall be to cover all aspects, should he become the selected contractor, in such a way as to install and deliver a complete, tested, fully operational and ready for immediate use turnkey system.
- 1.1.3 In particular, the tenderer shall:
 - Provide detailed systems design, system diagrams and assembly drawings. In case the tenderer finds the included drawings appropriate and adequately detailed, he may endorse them by submitting duly signed and sealed copies, thus assuming full responsibility for the implementation stage.
 - Tender for all equipment and any necessary additional items not specifically mentioned in the specification, without any claims for additional payment.
- 1.1.4 All the offered equipment must be functionally and aesthetically adapted to the surroundings they are incorporated into.

1.2 Overall system requirements

This paragraph describes the overall requirements applicable throughout the project. Additional and item-specific requirements are specified under the relevant chapters.

1.2.1 Regulation Compliance

All offered equipment and installations shall comply with the relevant standards and regulations in the following order of decreasing predominance.

- i) International Standards issued by international standardization organizations
- ii) E.U. Directives and Recommendations
- iii) National Standards and Regulations
- iv) Third Countries Standards, Regulations and Codes of Practice

An indicative, but not exhaustive, list of standards follows:

IEC 60364:	Electrical installations of buildings
IEC 60065:	Audio, video and similar electronic apparatus - Safety requirements
IEC 60651:	Sound level meters
IEC 60721:	Classification of environmental conditions
IEC 60849:	Sound Systems for Emergency Purposes
IEC 60942:	Electroacoustics - Sound calibrators
IEC 61672:	Electroacoustics – Sound level meters
IEC 61000:	Electromagnetic compatibility (EMC)
EN 55103-1:2009:	Electromagnetic compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 1: Emissions
EN 55103-2:2009:	Electromagnetic compatibility – Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use. Part 2: Immunity
BS 5839-8:	Fire detection and alarm systems for buildings. Code of practice for the design, installation and servicing of voice alarm systems.
BS EN 54-24:2008:	Fire detection and fire alarm systems. Components of voice alarm systems. Loudspeakers
ELOT HD 384 (based on GENELEC HD 384 and IEC 60364):	Electrical Installations
SMPTE 259 M-C (SD-SDI), SMPTE 292M (HD-SDI), SMPTE 424M (3G-SDI)	
FEK 399/B/3-4-2006 Official Journal of the Hellenic Republic:	National Regulation of Frequency Bands Distribution

Tenderer must specify any additional or alternative standards followed in his submitted designs.

1.2.2 Environmental Conditions

All tendered equipment shall have the following certificates according to the relevant directives.

- CE Marking
- Reduction of Hazardous Substance (RoHS) Certificate of Compliance
- Electromagnetic Compatibility (EMC) certification

Documentation proving compliance of the relative equipment with these directives and regulations may be requested by Cedefop and shall be made available by the tenderer within three days from official request date.

Furthermore, all equipment shall be suitable for operation under:

- 230V/50Hz AC power mains distribution
- Ambient temperature range of 10°C - 35°C

SECTION 2

2 SCOPE OF WORKS

2.1 General project description

The selected contractor shall supply, install, lay new or repurpose existing cabling, put into operation, setup the software modules, interface with some elements of the existing systems and infrastructure, test as an integral whole, document, commission and finally hand-over the updated audio, video and lighting systems, as detailed in these Technical Specifications (TS) and in the associated drawings in the attached Annex 2.

Ancillary, common IT equipment like Ethernet switchers, PCs, VDUs etc, will be sourced from Cedefop's current/future inventory for commonality reasons. No new AV equipment will be provided by Cedefop.

In this context, the contractor shall provide everything required to complete the project, which shall include but is not limited to: supply, provision and installation of hardware, software, data network, equipment enclosures, cable trunking, cable marking, cable termination panels and boxes for both feeble current signals and mains power distribution.

The contractor shall be responsible for the decommissioning and re-use or removal of any redundant equipment and/or cabling. At this stage and as per Cedefop's instructions, redundant equipment may be repurposed and installed elsewhere inside the premises or packaged for stowage. Removed cabling shall be scrapped after a relevant protocol is approved by Cedefop. All building reparations due to damages caused by installation interventions shall be meticulously carried out by the contractor. The cost of all above works shall be included in the total tender price (please see Annex H: point A: 1.4, 2.4, 3.3, point B: 1.12, 2.3, point C: 1.4, 2.5, 3.3 and point D: 1.8).

Starting from handover date, the contractor shall provide a minimum of 1 year for warranty maintenance after the completion and the acceptance of the systems and their installation + a maximum of 2 years for the provision of preventive and corrective maintenance. If the tenderer offers more than one year warranty, then the remaining 2 years for the provision of preventive and corrective maintenance will be detracted accordingly.

2.2 Project management

2.2.1 Responsible body

The Contractor shall report to the Facilities Manager of Cedefop and/or to a person duly authorised by the latter.

The contractor shall assign a specialist to act as a project manager to the project. A deputy shall also be appointed from the contractor's staff, introduced to the Cedefop project team and kept abreast of project details to maintain continuity in case the principal project manager is absent.

2.2.2 Working meetings

Weekly project meetings shall be held with the contractor's project manager at Cedefop during the phase of installation and commissioning.

2.3 Commencement Date and Implementation Period

Tenderer shall include in his tender a detailed time schedule (Gantt diagram) with description of the works. The preferred time framework for the implementation of the tasks is listed below:

2.3.1 General provisions

- Submission by the selected contractor of the final shop drawings (for all 3 conference rooms and the other rooms referred to in point 1.7) for approval to Cedefop before commencement of works - fifteen (15) days after the contract signature;
- The installation works shall be planned in such a way so that two (2) out of three (3) conference rooms shall remain operational; Europa room shall take precedence for the installation over the other two;
- Extra caution should be taken for avoiding delays in time schedules for software related issues (for example the delegate camera tracking interface mentioned in §4.2.B1b);
- The “As-Built” drawings must be submitted at the time of the commissioning.

2.3.2 Europa conference room

- Period for the delivery of equipment and materials - one (1) month after approval of shop drawings;
- Installation and commissioning should take place within three (3) months from approval of shop drawings.

2.3.3 Montessori conference room

- The delivery of equipment and materials should be completed before the end of Europa conference room’s works;
- Installation and commissioning should take place within one (1) month after completion of Europa conference room’s works (four (4) months from approval of shop drawings).

2.3.4 Rousseau conference room

- The delivery of equipment and materials should be completed before the end of Montessori conference room’s works;
- Installation and commissioning should take place within one (1) month after completion of Montessori conference room’s works (five (5) months from approval of shop drawings).

2.3.5 Other rooms

- The delivery of equipment and materials should be completed before the end of Rousseau conference room’s works;
- Installation and commissioning should take place within one (1) month after completion of Rousseau conference room’s works (six (6) months from approval of shop drawings).

2.4 Electrical Services

The majority of equipment shall be electrically fed from wall power outlets. For those permanently installed into racks, mains distribution units shall be provided at a number leaving a 20% - 30% margin for future additions.

Any electrical wiring from the local power distribution panel (e.g. video wall future installation in the cafeteria) should be done by qualified electrician/s.

All equipment should be electrically grounded in accordance with the safety code.

2.5 Cabling

2.5.1 Extent and Types

The tenderer is responsible for supplying and installing all fixed cabling between audiovisual system locations and equipment.

All power wiring or feeble current cabling should be run inside plastic or metal conduit or trunking. Power and signal cables should run inside separate trunks.

Indicative possible cable types from well-established manufacturers in the market like Belden, Canare, Draka, etc. or equivalent are given only as an example for clearer illustration rather than as a list of technical specifications. The tenderer may offer any of the given indicative types or an equivalent.

2.5.2 Cable termination and coding

All signal cables must be terminated into suitable connectors. Indicative possible connector types from well-established manufacturers in the market like Neutric, Canare, Canon, etc or equivalent are given as an example. Crimp tool connectors are preferred over soldered ones. This requirement applies also to all cables installed inside equipment racks. Alternatively, cables in racks can be terminated into suitable patch bays or termination panels (i.e. 3G MUSA video panels, half-normalized ¼” audio jack-fields).

All cables shall be marked and labelled in an easily readable, durable and fixed manner. Labels and markings should be protected against accidental removal, with a transparent heat shrink sleeve.

A simple alphanumeric marking of the cables via plastic numerated rings will be acceptable but a more comprehensive way indicating where the cable runs from and where it is destined to is preferred. In either case, cable lists in paper and electronic forms shall be submitted during commissioning phase.

All connectors installed in the connection boxes and patch bays, if used, must be labelled. The labelling system must be logical, uniform and clear. Colour coding may be used in addition to plain text to illustrate different uses of the connector groups. Label strips inserted into the label rail must be used for patch bays, where in the case of connection boxes silkscreen printing is preferred. In either case, labelling with stickers is not acceptable. In principle the same colour label is used in both patch bays and connection boxes when visually possible.

In the table below is given an illustrative example for the labelling system:

Installation	Signal Type	Code Name	Colour
Audio	Analogue	AAD	Orange
	Digital	DAD	Blue
Video	Analogue	AVD	Purple
	Digital	DVD	Green
	Computer	CVD	Yellow
Serial Control	RS-232	232	Red
	RS-422	422	Brown
Ethernet	10/100	ETH	Gray
	1 Gbps	1GE	White

2.6 Materials and Work Methods

2.6.1 Approved Materials

All components and accessories of the system must comply with the standards and regulations mentioned in par. 1.2.1 above. The tenderer may choose the methods and materials for the installation unless otherwise explicitly stated in this document and its annexes.

The contractor will gain final approval of miscellaneous materials and working methods along with that for shop drawings.

2.6.2 Assembly Works

Assembly works include the cost of all required items and labour for full furnishing of the equipment and control rooms as well as portable equipment racks. This cost should be included in the installation cost (please Annex H: point A: 1.4, 2.4, 3.3, 4.9, point B: 1.12, 2.3, 3.7, point C: 1.4, 2.5, 3.3 and point D: 1.8).

The tenderer must consider at least the following:

- equipment racks and supports with necessary accessories
- inner cable routes or cable management system for racks
- mains distribution units
- earthing of racks and isolation of equipment
- connector panels, equipment shelves, blank or air flow panels and fan trays
- patch bays and/or termination panels for fixed cabling
- wiring between the equipment involved in the project, new or existing
- labelling and documentation

The abovementioned works apply to all assemblies for all systems even when not explicitly stated.

2.6.3 Additional Works

For the installation of equipment in the conference rooms the raised floor and false ceiling parts will have to be dismantled, and remounted again after the completion of the installation. This work is part of the contractor's obligations and should be performed by specialized technicians without leaving visible traces of the intervention.

The spaces where installations take place must be cleaned after the respective work of the technicians is completed. Where necessary, the equipment delivered must be thoroughly and effectively covered for protection. All materials, tools and personnel for the abovementioned cleaning and covering should be included in the tendered price.

All installation work should be done in an orderly fashion and in a style suitable for any given installation location. Cedefop shall approve the colour of all equipment visible to the public eye and inspect installations during the implementation. Those failing to fulfil previous requirements must be fixed or re-done until they are considered acceptable. All finishing works should be included in the tenderer's proposal and calculated in the financial offer (please refer to Annex H: point A: 1.4, 2.4, 3.3, 4.9, point B: 1.12, 2.3, 3.7, point C: 1.4, 2.5, 3.3 and point D: 1.8).

SECTION 3

3. PROJECT PURPOSE

Cedefop, in the course of implementing its mandate, uses 3 existing conference rooms of different sizes, i.e. Europa (large), Montessori (medium) and Emile Rousseau (small). The AVCI (Audio, Video and Conference Infrastructure) assets were commissioned and are in operation since late 1999, without any substantial upgrade in the meantime.

Having the experience of over a decade of successful operation, Cedefop is currently undergoing a revamping stage, comprising the upgrade of the assets that will, at some point, become obsolete, protecting at the same time its past investments. The scope of the project, bearing the acronym RECOVER II, addresses the needs of the Organization for the next 5 to 10 years, considering the types, quantities and budgetary funds for latest technology equipment that will ensure the continuation of efficient and qualitative services in par with the importance and status of a European Organization.

The RECOVER II project covers the 3 main conference rooms of Cedefop plus 4 additional rooms (currently personnel or meeting rooms), namely:

- a) Europa, Montessori and Emile Rousseau conference rooms
- b) Library on 1st floor (A' ISOGEIO - 0.A.15)
- c) Meeting Room on 1st floor (A' ISOGEIO - 0.A.40)
- d) Personnel Room on 2nd floor (B' ISOGEIO - 1.B.24)

and installations as following:

- Audio Installations
- Video Installations
- Lighting Installations

SECTION 4

4. EQUIPMENT SPECIFICATIONS & INSTALLATION REQUIREMENTS

4.1 Present State of Installations

In this paragraph the tenderer may find a brief description of the state of installations before the revamping.

This in conjunction with:

- Annexed list of drawings (Annex 1 to the Technical Specification (TS));
- System Diagrams (Annex 1 to the TS);
- Existing Equipment Inventory (Annex 1 to the TS)

and in compliance with the new state of installations as described in the next paragraphs and the relevant annexed data, i.e.:

- Conceptual and constructional drawings clarifying equipment locations and installation details (Annex 2 to the TS);
- New System Diagrams depicting structures, interconnections and signal flows (Annex 2 of the TS);
- Bill of Materials to be tendered (Annex H),

which will help the tenderer identify the equipment and works needed for achieving the goals of this project. More particularly, the comparison of the two states (existing and new state of installations) will reveal information regarding what to supply (in terms of quality and quantity), how to install and the intended function for each described system.

4.1.1 Interpretation and Conferencing

Europa Room: Europa is the largest conference hall of the premises, capable of accommodating 150 delegates. The hall is “surrounded” by 12 booths, 11 for interpretation purposes, 1 of which doubles as an Electronic News Gathering (ENG) Booth and 1 for the control room.

The existing state of the room is depicted in Annex 1: drawings AVCI.E01-exst, AVCI.E02-exst and AVCI.E03-exst respectively along with Table E1 that contains the existing equipment of Europa Room, Booths and the Control Room.

Montessori & Emile Rousseau Rooms: Montessori is the medium conference room and can accommodate 70 delegates. The hall is “surrounded” by 6 booths, 5 for interpretation purposes and 1 for the control room of both Montessori and Emile Rousseau.

Emile Rousseau is the smallest one accommodating up to 38 delegates. Two (2) interpretation booths serve this hall.

The existing state of those two rooms is depicted in Annex 1 to the TS: drawings AVCI.M01-exst, AVCI.M02-exst and AVCI.M03-exst respectively along with Tables M1 & R1 that contain the existing equipment of the Rooms, Booths and the Control Room.

4.1.2 Reinforced Sound

The reinforced sound system of the rooms is based on a number of passive loudspeakers positioned at the corners of each room just below the false ceiling. Corresponding power amplifiers and audio mixers drive them.

Europa and Montessori Rooms are equipped with 4 loudspeakers each, while Emile Rousseau Room has only 2. The locations of these loudspeakers are depicted in Annex 1 to the TS: drawings AVCI.E04-exst and AVCI.M04-exst respectively.

4.1.3 Video & Projection

The video projection systems of the three conference rooms comprise SD (standard definition) cameras, projectors, projection screens and video monitors, of various types and quantities, as well as a software-hardware package for delegate camera tracking.

The locations of the video equipment are depicted in Annex 1: drawings AVCI.E04-exst and AVCI.M04-exst.

4.1.4 Teleconference

Teleconference capability is available only in the Europa room by means of a Tandberg 6000 Series codec, as well as in two of the four additional rooms mentioned in previous §3.2 c and d.

Additionally, in the rear part of the Library on 1st floor (A' ISOGEIO - 0.A.15), there is an open space that is configured as a meeting area comprising a desktop PC and a wall LCD display.

The layouts of the rooms with their existing equipment are depicted in Annex 1: drawing AVCI.V01-exst.

4.1.5 Lighting

The lighting system of the conference rooms comprises dimmers controlled by a DMX console that sets the general lighting level of the rooms. Only general lighting fixtures are currently in place.

An electrical curtain for room darkening is also available.

4.1.6 IT Integration

Cedefop has recently carried out a full upgrade of its Ethernet infrastructure comprising 1Gbps edge switches and 10Gbps backbone. This bandwidth is sufficient for the implementation of numerous AV applications over the Ethernet. There is also wireless Internet connectivity in the public spaces and corridors for two users groups: (i) Cedefop employees and (ii) Guests.

Regarding Internet connectivity there are two active-active gateways:

- A main fibre cable Metro Ethernet connection with EΔET (The National Research and Technology Network), currently at 20Mbps, that can easily be upgraded to 40Mbps.
- An auxiliary wireless connection with Forthnet at 8Mbps symmetric.

Normal load is approximately 10Mbps leaving a margin for teleconference applications via IP.

4.2 New State of Installations

This paragraph is subdivided to the following, discussed in detail item-by-item:

(A) Audio Installations:

- A.1 Reinforced sound design for Europa Room
- A.2 Evacuation system interconnection with Europa room public address
- A.3 Repurposed Europa ST Booth – Audio feeds for TV ENG Crews
- A.4 Portable Digital Audio Recorder system

(B) Video Installations:

- B.1 HD Video, projection and videoconference installations for all 3 rooms
- B.2 Europa video relay infrastructure for Cafeteria video wall future installation
- B.3 Portable Teleconference system

(C) Lighting Installation.

- C.1 Europa Room Physical Darkening
- C.2 Artificial Lighting Enhancement
- C.3 General Lighting Control from within the room (for the cleaners' service)

4.2.A Audio Installations

4.2.A1 Reinforced sound design for Europa Room

A revised sound system based on an electro-acoustically simulated sound design shall be tendered. In order to ascertain that the results produced by this 3D simulation adequately match the acoustic behaviour of the room, tenderers are required to acquire acoustic measurements, namely Reverberation Time (R60) at full frequency range. The Critical Distance (Dc) must also be derived.

The principal parameters of the sound design are the following:

Maximum operating SPL	96 dB(C) +/- 3dB @ 1KHz
Total Harmonic Distortion (THD) @ maximum level	< 5%
Frequency Response (speech)	100Hz to 8kHz (+/-4dB)
Frequency Response (music reproduction)	50Hz to 14kHz (+3/- 6dB)

The software to be used for the simulation shall be EASE v.4.3. or higher. Cedefop provides annexed to this document the 3D model of the room (in packed project electronic form), however no surface materials are assigned to it. These are to be specified by the tenderer in order to match the measured acoustic characteristics of the room.

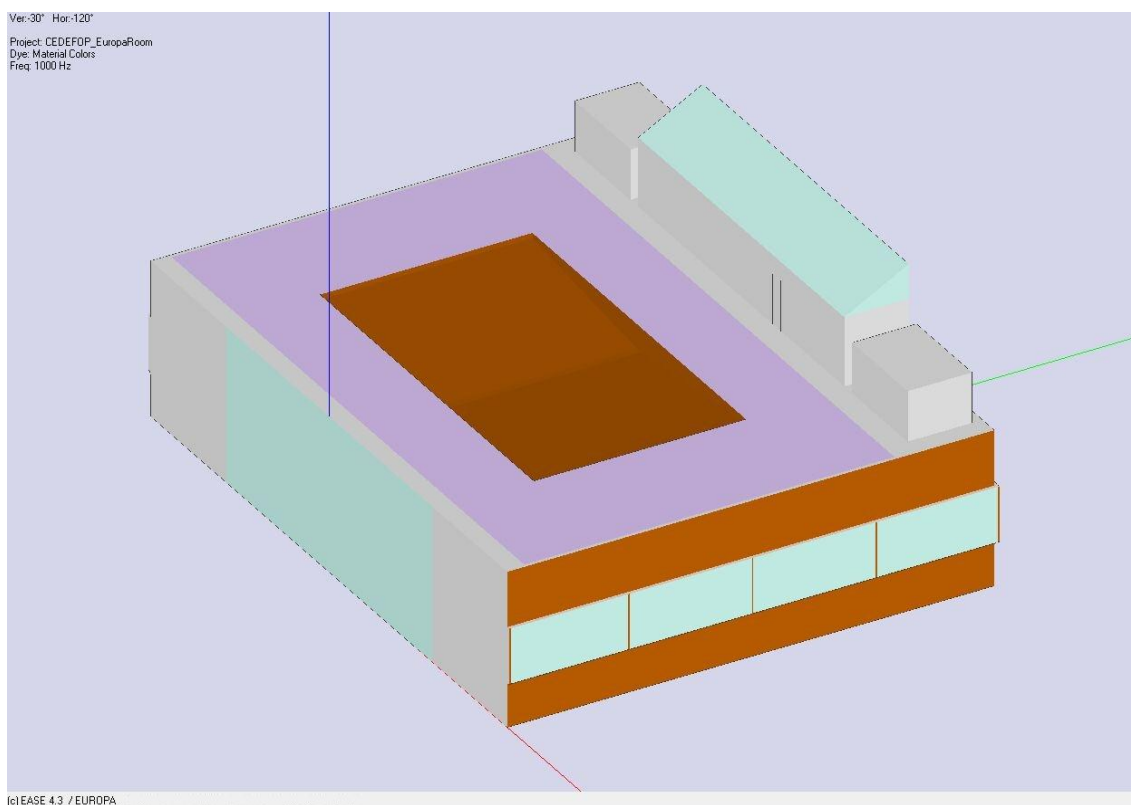


Image 1 Europa 3D model – Outside View

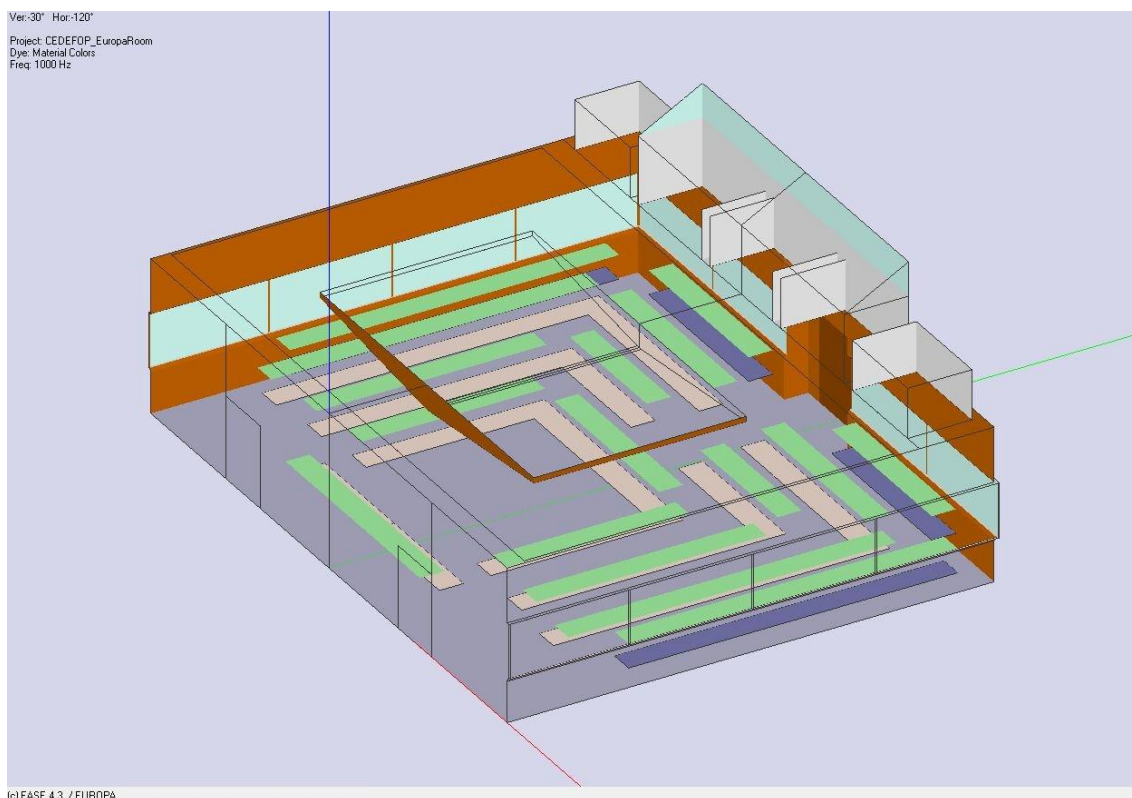


Image 2 Europa 3D model – Audience Areas @ 1.2m from floor

The number of loudspeakers, their type, position and aiming direction are the expected outcome of the simulation. The tenderer is free to re-use the existing four (4) loudspeakers of the room although a new set of more suitable loudspeakers is preferred. The simulation outcome must show a sound coverage at the audience areas of the room within the following tolerances:

Uniformity of Coverage (SPL Direct)	125Hz: +/- 4 dB 250Hz: +/- 3 dB 500Hz: +/- 2 dB 1KHz: +/- 1,5 dB 2KHz: +/- 2 dB 4KHz: +/- 3 dB
Gain-before-Feedback* (presidents' row) Gain-before-Feedback* (at acoustically worst delegate seat) *@ 125Hz – 4KHz with one active microphone	>= 10 dB >= 6 dB
Intelligibility @ 1KHz – 4KHz	ALCons: < 10 % (fair - good) C50: > 3 dB

In case the preferred values for gain before feedback cannot be attained (either spatially or at a specific frequency), the minimum values can be used on the condition that electronic means of dynamic feedback suppression are to be employed in the amplification chain, providing the extra headroom.

Cedefop's current operational practice is to have up to 3-4 microphones simultaneously active, spread around the room.

Sound Design Deliverables:

- EASE Packed Project in electronic form (file extension *.ppj, comprising the files with the following extensions: *.frd, *.far, *.ffc, *.fvt, *.fwm, etc.)
- Room Area Mapping for both SPL direct and Intelligibility characteristics at 1/3 Octave with centre frequencies: 125 Hz, 250 Hz, 500 Hz, 1KHz, 2KHz and 4KHz, in colour paper copy and electronic form.
- Amplification Chain Diagram with gain values denoted at every stage
- System interconnection diagram with equipment types.

4.2.A2 Conference Rooms Interconnection with Evacuation System (Building Public Address)

An extension to the existing evacuation system comprising a total of twenty (20) wide dispersion loudspeakers shall be provided for the coverage of the three (3) conference rooms, i.e. ten (10) for Europa, six (6) for Montessori and four (4) for Emile Rousseau. The loudspeakers shall be recessed in the false ceiling in a pattern ensuring uniform coverage of the entire floor area.

These loudspeakers shall become part of Cedefop's existing fire alarm and evacuation system. As such they must be compatible, in all aspects, with the latter (wiring, interconnections, etc). They shall have 100V transformers and be divided into three (3) zones, which shall be provided and installed in the existing Philips SM30 management unit. Two existing 1X100W amplifiers (SQ45 – LBB 1342/40) shall be used for amplification purpose.

Drawings TS-AUD.01 and TS-AUD.02 in Annex 2 to the TS, depict a possible loudspeakers' layout while TS-AUD.03 gives the interconnection diagram.

The loudspeakers must comply with BS5839 Part 8 and/or EN54-24 standards and the following core specifications:

False Ceiling Installation	Yes, inside fire resistant enclosure
Power	≥ 6 Watt
Dispersion angle (-6 dB)	180° @ 1kHz / 50° @ 4kHz
Sensitivity	> 87 dB (SPL) (at 1 kHz, 1 m)

4.2.A3 Repurposed Europa ST Booth – AV feeds for TV ENG Crews

Occasionally, Cedefop is asked to accommodate television ENG crews that wish to broadcast conference meetings. These crews use their own cameras for image acquisition but receive audio from Europa's Control Room. In order to avoid the inconvenience caused by temporary cabling along the corridors, Cedefop decided to double one of Europa's interpretation booths (i.e. Booth O.A.61) for this purpose as well. The booth shall be equipped with a termination box (ENG-CB: Electronic News Gathering Connection Box) positioned under the interpreters' desk and opposite the door, to serve four (4) TV ENG Crews providing the following connections and tie-lines:

- Sixteen (16) audio tie lines. Four (4) for each crew that carry the floor language plus three (3) translations. Interconnection with existing PHILIPS LBB 3508 Audio Media Interface in Europa Control Room via four (4) balanced audio distribution amplifiers 1:5.
- Four (4) video tie lines, one (1) for each crew, routing four (4) direct outputs of the 16x16 Video Router. As such, each crew can acquire any router input, i.e. cameras, projected material, remote video contribution scenes or material via teleconference, etc.
- Four (4) 4-wire intercom connections for co-ordination in case of Outside Broadcast (OB) or Satellite News Gathering (SNG) live transmissions. Interconnection with Cedefop's central telecommunications room (Room number II.2.3, see drawing TS-VID.04 in Annex 2 to the TS) for further connection to the public telecommunications grid.

A detailed description of the Electronic News Gathering Connection Box and its interconnections can be found in Annex 2: drawings TS-AUD.04, 05 and 06. The depicted cable routing, front panel layout and enclosure dimensions are conceptual proposals that can be modified provided that at least equal or enhanced functionality is achieved.

The enclosure shall be manufactured from 1mm galvanized sheet steel with electrostatic powder coat finish to match booth-finishing colours. It shall have a hinged door with lock and flat mounting plate manufactured from 3mm anodized aluminium sheet. The plate shall be populated with professional quality (Neutrik or equivalent) chassis connectors according to the relevant drawings and the following table:

INDEX	TYPE OF CIRCUIT	QTY	CHASSIS CONNECTOR	TYPE	CABLE TYPE
1	AUDIO TIE	16	XLR 3-PIN	MALE	16-PAIR AUDIO
2	VIDEO TIE	4	BNC	F-F ADAPTOR ISOLATED	COAXIAL
3	4-WIRE INTERCOM	4	RJ-45	TWIN SOCKET	UTP 4-PAIR

4.2.A4 Portable Audio Recording System

A portable digital audio recording system shall be provided for use in places other than the conference rooms and shall comprise of:

- a) One (1) digital audio recorder with level adjustment capability and recording media
- b) Two (2) wireless microphone systems, one (1) with lavalier microphone and one with handheld microphone
- c) One (1) boundary microphone
- d) One (1) shotgun microphone
- e) One (1) headphone set
- f) One (1) small portable rack on casters (trailer) for stowage and portability purposes of the above equipment.

a) Audio recorder

The audio recorder should be suitable for portable use thus have a compact yet fully functional size with level adjustment, preferably faders (rotational knobs are not favoured) for recording and playback operations. It should provide at least 4-track simultaneous recording and playback. The recording shall be on removable media, HDD and/or SDHC card. In case of not changeable HDD, material transfer shall be provided via SD cards. Optical media (e.g. CD/DVD) are not acceptable. The recording data format should be at-least 44.1kHz, 24bit. The capability of recording at sampling rate up to 48KHz or 96KHz is preferred.

The recorder should comply with the following core requirements:

Number of Inputs (min)	4x
Simultaneously Recorded Channels	4x
Number of Outputs (min)	4x
Simultaneous Playback Channels	4x
Input Connectors	XLR and TRS or Combo type
Level Adjusting Capability (preferred/accepted)	Linear Faders / Rotary Knobs
Phantom Power (preferred/accepted)	4x / 1x
Frequency Response	20 Hz to 20 kHz (+1/-3 dB)
Dynamic Range	>= 100 dB
Output Residual Noise Level (line input sensitivity = 4dB, Input Level: Minimum)	-85 dBu or less
Recording Media	HDD and/or SDHC cards (GB)
Recording data format (preferred/accepted)	96KHz, 24bit / 44.1kHz, 24bit
PC interface	USB 2.0
Batteries	AA dry alkaline battery

b) Wireless microphone system

Regulatory Issues

Radio frequency equipment, such as wireless microphones, must meet the valid year 2012 radio and telecommunications terminal directive and its revisions plus any valid local standards and requirements, such as the National Regulation of Frequency Bands Distribution [Εθνικός Κανονισμός Κατανομής Ζωνών Συχνοτήτων (ΕΚΚΖΣ)].

Cedefop is responsible for applying to EETT (Hellenic Telecommunications and Post Commission) for the necessary radio spectrum permits. The tenderer must ensure that offered equipment is eligible for obtaining such a permit. The Contractor shall provide all necessary documents, certificates and other paperwork, to be attached to the permit application and assist Cedefop during the application procedure by providing any further requested technical document for that purpose.

The system

Two (2) wireless microphone sets should be provided comprising:

Set 1.

- Rack mount (1U or ½ U) receiver
- Belt pack transmitter
- Lavalier microphone with clip-on accessory
- Accessories: antennas, batteries, chargers, etc.

Set 2.

- Rack mount (1U or ½ U) receiver
- Handheld transmitter
- Microphone capsule for transmitter
- Accessories: antennas, batteries, chargers, etc.

Both receivers should employ true diversity technology with dual reception antennas and two individual receiver chains each. The system should comply with the national frequency band allocation plan (see above paragraph). It should be robust against natural and man-made noise and interference (e.g. GSM phones, TV transmissions, etc.) and be frequency-agile for the same reason.

The tenderer should offer microphone sets with accompanying antenna system providing good coverage for at least 10 m. between transmitter (TX) and receiver (RX) regardless of typical furniture obstacles or reflecting surfaces. Placement in and design of the portable rack enclosure shall not impede good reception by inserting any unnecessary shielding.

The belt-pack transmitter should be supplied with a rechargeable battery system for charging on a docking charger or another charging system (cable or similar), which obviates battery removals. Maximum charge time from empty to full capacity shall be less than 8 hours.

The receiver should have squelch control and a read-out for the RF level and the deviation and make it possible to see which receiving diversity channel is engaged.

Transmitting and receiving elements should be from the same manufacturer. The microphones could be from a different one provided they are mutually compatible. Mini XLR is the preferred belt-pack connector.

The receiver should comply with the following core requirements:

True Diversity	Yes
Frequency Bands UHF: 500...860 MHz / SHF: 1,8 GHz	1 (UHF or SHF) (accepted), 2 (1x UHF and 1x SHF) (preferred)
Selectable frequencies	≥ 16 (accepted), freely assignable (preferred)
System Dynamic Range (TX–RX)	> 110 dB(A)
THD	< 1 %
Transmitter Battery Indication	Yes
Audio Level Indication	Yes
Output Audio Level	Balanced: 4 to 9 dBV
Power Supply	Yes

The transmitter should comply with the following core requirements:

Selectable frequencies	16
Commander	Yes
Dynamic Range	(see above)
RF radiation	≥ 10 mW EIRP
Battery Status Indication	Yes
Battery Operation	Yes, AA batteries (accepted) / Rechargeable high capacity Lithium Ion (preferred)
Weight	< 100 gr (without batteries) or < 160 gr (with batteries)

The wireless microphones that complement the sets should comply with the following main specifications.

Lavaliere Microphone	
Pick-up Pattern	Cardioid
Transducer Type	Condenser
Frequency Response	70 Hz to 16 KHz
AF sensitivity	$\geq 7,0$ mV/Pa
Connector Type	Mini 3 pin XLR plus adapter to standard XLR

Microphone Capsule for Handheld transmitter	
Pick-up Pattern	Cardioid
Transducer type	Dynamic
Frequency Response	90 Hz to 16 KHz
AF sensitivity	$\geq 2,5$ mV/Pa
Connector Type	Standard 3 pin XLR

c) Boundary Microphone

This microphone should be suitable for placing on a flat, unobstructed surface. It should have a permanently charged condenser element with a hemispheric pickup pattern. It should be suitable for direct connection to the portable recorder.

It should comply with the following technical specifications:

Pick-up Pattern	Hemispheric
Frequency Response	50 Hz – 17 KHz
AF Sensitivity	≥ 10 mV/Pa
Sound pressure level (SPL)	110 dB
Dynamic Range	94 dB
Signal-to-noise ratio	70 dB
Phantom Power	11~52 V DC phantom, 4mA

d) Shotgun Microphone

It should comply with the following technical specifications and be accessorized with one (1) desktop stand:

Pick-up Pattern	Super-cardioid/lobar
Transducer type	Back-Electret
Frequency Response	50 Hz – 18 KHz
AF sensitivity	-30dBV/Pa
Sound pressure level (SPL)	> 120 dB (THD = 1 %)
Connector Type	Standard 3 pin XLR

e) Stereo Headphones

They should comply with the following technical specifications:

Transducer principle	Dynamic - Closed
Frequency Response	16 Hz – 22 KHz
Sound pressure level (SPL)	100 dB (SPL)
Sensitivity	≥ 95 dB/mW
THD	< 0.3 %

f) Portable Rack on Casters

One (1) small trailer for installation and portability purposes of the portable audio recording system should be provided. It should be made of aluminium and bear heavy-duty casters with breaks. It should have appropriate rails for rack-mount equipment as well as a working surface for desktop ones. The smaller equipment (e.g. microphones, belt packs etc.) as well as connection cables should be stored in suitable drawers for safekeeping. Sensitive equipment, such as microphones, should be placed into foam surrounded pouches. It shall have appropriate type and number of mains distribution units to accommodate all equipment installed in the trailer.

4.2.B Video & Projection Installations

4.2.B1 HD Video, projection and videoconference installations for all 3 rooms

A full installation HD video upgrade shall be provided only for Europa room. The smaller rooms shall be only partially upgraded or refurbished with redundant Europa equipment (see locations of equipment depicted in drawings TS-VID.01 and TS-VID.02 in Annex B). One additional aspect of the required installation upgrade is to have the possibility for allocation of the teleconference facility to all 3 rooms, although not simultaneously (see diagram in drawing TS-VID.03, Annex B). A brief description follows:

- Three (3) new HD cameras only for Europa room. Existing SD cameras shall be re-used, one (1) in Montessori and two (2) in Emile Rousseau room.
- Europa will be equipped with one (1) new camera controller, one (1) new digital video switcher and two (2) new video projectors capable of ultra wide screen (i.e. 2x 16:9 or 16:10 seamlessly joint side-by-side, 6.500 - 8.500 Ansi Lumens). No projector lifts shall be provided; they shall be suspended from the lighting bridge.
- Emile Rousseau room inherits Europa's camera controller while Montessori keeps its own (existing) one.
- Both Montessori and Emile Rousseau shall share one (1) new digital video switcher.
- Montessori will be equipped with one (1) new projector (3.500 - 4.500 Ansi Lumens).
- Emile Rousseau room inherits Europa's existing projector.

Any needed IT equipment (e.g. Ethernet switchers, PCs, monitors, etc.) will be provided by Cedefop. Tenderers should bring in any special boards needed and undertake all labour.

A detailed list of the equipment to be provided by the tenderer can be found in Annex 2/ Table-B1. Below is given a list of the required equipment allocation regarding video and projection installations:

Video, Projection and Teleconference List of Specified Equipment					
Index / Paragraph	Description of Equipment	Qty	Allocation Room		
			Europa Room	Montessori Room	Emile Rousseau Room
a)	HD PTZ Camera	3	3	2x existing + 1x re-used from Europa	2x re-used from Europa
b)	Remote PTZ Camera Controller	1	1	1x existing	1x re-used from Europa
c)	Multi-Format Switcher (with 2x DVI-D outputs)	2	1	1x shared between the two rooms	
d1a)	HD Projector 6.500 - 8.500 Ansi Lumens	2	2	--	--
d1b)	Projection Screen (WxH 8m x 3m)	1	1	--	--

d2)	HD Projector 3.500 - 4.500 Ansi Lumens	1	--	1	1x re-used from Europa
e)	Computer Interface Box (equivalent to EXTRON RGB-404)	1	--	--	1
f)	HD Monitors LCD 17" (rack mount)	6	3	3x shared between the two rooms	
g)	Digital Video Router 16x16	1	1x shared between the three rooms		
h)	Sync Pulse Generator SD/HD/3G-SDI signals	1	1x shared between the three rooms		
i)	Teleconference Codec	1	1x shared between the three rooms		
j)	Set of Interfacing Peripherals				

a) HD PTZ cameras

Three (3) HD PTZ cameras shall be provided for Europa room. They shall be recessed in the false ceiling at the same positions as the existing ones. They shall comply with the following core specifications:

Electrical Characteristics	
Imaging Device	1/3" MOS or better
Sensor Resolution	Native 1920 x 1080 or more
Picture Elements (per CCD)	2 Mpixels or more
Signal-to-Noise Ratio	> = 50dB
Sensitivity	6 Lux (F1.6, 50IRE, 24dB)
Video Formats	720p & 1080/50i (accepted), 720p & 1080/50p (preferred)
Video interface	HD-SDI/HDMI (accepted) / 3G-SDI (preferred)
Ethernet Connection	Yes, 100Mbps (preferred)
Power	DC in
Mechanical / Optical Characteristics	
Optical Zoom	18x
Lens Aperture	f1.6 wide, f3.0 tele
Focal length	F=4,7 to 84,6mm
PTZ control	YES
Pan Range	± 170°
Tilt Range	-30°/90°
Speed (maximum)	> = 60°/sec
Focus	Auto / Manual / Switchable
Mechanical Noise	NC40
Serial Control	RS-232 (accepted) / RS-422 (preferred)

b) Remote PTZ Camera Controller

One (1) camera controller shall be provided for the remote control of the 3 HD PTZ cameras in Europa room. It shall be capable of controlling a minimum of three (3) cameras using a joystick. It shall control all primary camera settings (i.e. PTZ, Focus, Iris) using Serial Control and/or IP Protocols and offer the function of memory presets per camera.

Core specifications for Remote PTZ Camera controller:

Number of Cameras	> = 3
Control Protocols	Serial Protocol (RS-232C/RS-422) (accepted) / IP Protocol (preferred)
Adjustment functions	Pan, Tilt, Zoom, Focus, Iris, Gain, White Balance
Preset Positions / Camera	> = 45 (*)

(*) Compatibility with several camera manufacturers is preferred in the sense of a multitude of camera presets. Common camera controllers have 12 to 16 presets per camera, which are not sufficient for the current application. Europa can host 112 possible speakers each of which should have one camera preset. If those positions were to be evenly distributed among the 3 cameras, 38 presets per camera would be needed. The specified 45 presets/camera cater for some uneven distribution among them.

IMPORTANT NOTE!

At present, delegate camera tracking is implemented via Philips Allegiant 8200 video controller. The offered HD camera controller shall be compatible with the existing software and conference system (Philips/Bosch LBB 3500/10). If this is not feasible, new software should be offered. As a last resort, custom made interface software should be developed. As this may develop into a time consuming task, the tenderer shall state in detail the way he intends to implement it and specifically reflect the time-frame for it in the Gantt diagram of his offer (see §2.3).

c) Multi-Format Switcher

Two (2) video switchers shall be provided, the first to serve Europa room and the second to serve both Montessori and Emile Rousseau rooms. They should be of the same type but differ only in the numbers and types of inputs and outputs. This should be accomplished via a base unit having a selection of optional inputs and outputs expansion boards. The minimum number and type of each switcher follows:

		Europa Room	Montessori & Emile Rousseau Rooms
Digital Inputs	SD -SDI	> = 8x	> = 8x
	DVI-D (for PC connection)	0	> = 1x
Analogue Inputs	Sync In (BB/Tri-level)	1x	1x
Digital Outputs	SD/HD-SDI	> = 4x	> = 4x
	DVI-D (for projection)	> = 2x	> = 1x
Analogue Outputs	VGA (*)	0	1x

In case these combinations of inputs and outputs are not available, change of type in either case by means of suitable converters (e.g. HD-SDI to DVI and vice versa) is acceptable; mixing SD-SDI and HD-SDI signals simultaneously is preferred, yet isolated operation in SD or HD-SDI is accepted.

(*) Existing Sony projector shall be re-used in Emile Rousseau Room, having a VGA (HD-15 pin) as an input. If the switcher has an analogue DVI output, a cable adapter will be used. Otherwise, a digital to analogue converter SD-SDI to RGBHV/VGA should be provided.

For all remaining features the following table applies to both.

Image Processing	
Mixer Type	1 M/E
Multi-viewer Output	1x 16 channels (accepted)/ 2x 16 channels (preferred)
Input Frame Synchronizer	Every input
Up-converter/Re-sizing	None (acceptable) / Every input (preferred)
Picture-in-Picture (PiP)	1x (accepted)/ 2x (preferred)
Chroma Keyer	1x
Down Stream Keyer (DSK)	1x
Freeze function	Yes
Internal Still Store	1x
Transition effects	
Transition Patterns	Wipe, Mix-Dissolve, Slide
DVE transitions	Yes
On screen display	Yes
Control Surface	
Input Buttons	12x PGM Bus and 12x Preset Bus
T-Bar	Yes
Joystick	Yes
Network Connectivity	Ethernet
Alphanumeric LCD	On surface

d) HD Projector

d1) Europa Equipment

d1.a) Projectors

Two (2) HD projectors shall be provided for Europa room. They shall be suspended from the lighting bridge having a distance of 3,60m between them (i.e. 1,8m on either side of the room axis) and preferably cover the projection screen with an overlap of 40cm, creating a seamlessly joint composite picture. They shall be equipped with two (2) lamps, offer lens remote control and brightness in the range of 6.500 – 8.000 ANSI Lumens.

Core specifications follow:

Display Technology type	LCD or DLP
Number of panels	3x Chips
Native Resolution	1920x1080 (accepted) / 1920x1200 (preferred)

Lamps	2x 330Watt
Brightness	6.500-7.200 (accepted) / 7.300-8.000 ANSI Lumens (preferred)
Contrast	2.000:1 or better
Lens	Zoom/Focus/Shift control Motorized
Lens Throw ratio	1.7-2.1:1 (closest available)
Input	DVI-D, HDMI, HD-SDI (2 out of 3, HD-SDI is preferred)
Network Connectivity	Ethernet
Acoustic Noise	40 dB(A) or better
Weight (lens included)	< 30 Kgr

d1.b) Projection Screen

One (1) custom made wide electric projection screen of dimensions 6,7x3,0m (WxH) shall be provided for Europa room to replace existing screen 4x3m. The screen shall be folding into suitable enclosure and be operated via remote control. The motorized operation shall be silent (NC45).

d2) Montessori Projector

One (1) HD projector shall be provided for Montessori room. It shall be placed on the existing lift, thus attention should be paid to overall dimensions and weight. Lens motorized control is preferred, yet manual control is accepted. Its brightness shall be in the range of 3.500 – 4.500 ANSI Lumens.

Core specifications follow:

Display Technology type	LCD or DLP
Number of panels	1x Chip (accepted) / 3x Chips (preferred)
Native Resolution	1920x1080 (accepted) / 1920x1200 (preferred)
Lamps	1x 275Watt
Brightness	3.500-4.000 (accepted) / 4.100-4.500 ANSI Lumens (preferred)
Contrast	1.000:1 or better
Lens	Zoom/Focus/Shift control Manual (accepted) / Motorized (preferred)
Lens Throw ratio	1.7-2.1:1 (closest available)
Input	DVI-D, HDMI (*), HD-SDI (1 out of 3)
Weight (lens included)	< 12 Kg

(*) If the projector has only HDMI input, a cable adapter SD-SDI to HDMI will be used.

e) Computer Interface Box

One (1) computer interface box shall be provided for Emile Rousseau room in view of connecting a Laptop. It shall be recessed in the existing raised floor, close to the chairman's desk (see drawing TS-VID.02 in Annex 2 of the TS). In order to maintain uniformity of equipment, it shall be interoperable with Extron RGB-404 I/F boxes that exist in the other rooms.

f) HD Monitors

A total of six (6) HD monitors, TFT or LCD 17", suitable for rack mount installation shall be provided. Three (3) of them shall be installed in Europa's control room existing or new rack whereas the remaining three (3) in Montessori and Emile Rousseau control room respectively.

They shall comply with the following primary specifications:

Technology	TFT or LCD
Display colour depth	8-bit (16.77 million colours – accepted) / 10-bit RGB (1 billion colours – preferred)
Display Resolution	RGB 1920x1080 (accepted) / RGB 1920x1200 (preferred)
Picture size (diagonal)	> 16 1/2 inches
Colorimetry	REC 709
Colour calibration software	Preferred
Inputs	HD-SDI
Video format	576/50i, 720/50p, 1080/50i
Installation	Rack-mount (6U or 7U)
Control Panel	Full functions with save and recall setup facility

g) Digital Video Router

One (1) video router with 16x16 matrix size shall be provided. It shall be capable of handling SD, HD and 3G-SDI signals simultaneously with automatic input recognition. It shall provide configuration and control option via LAN.

Matrix Size	16x16
Video Signals Format	SD, HD and 3G-SDI (automatically recognized)
Signal Conditioning	Automatic EQ and re-clocking
Reference Input	Black burst and Tri-level Sync
Control Panel	Integrated Front panel buttons or Remote control unit (2x 16 button rows)
Control	Ethernet via browser, Serial RS-232/RS-422
Dimensions	Router: 1U, Control Panel: 1U (if separate)

The router shall accommodate the following inputs and outputs:

Video Router 16x16 signal assignment				
Index No.	Inputs		Outputs	
	Name	Description	Name	Description
1	CAM.E1	HD PTZ Camera #1 (Europa Room)	MON.E1	HD Monitor #1 (Europa Control Room)
2	CAM.E2	HD PTZ Camera #2 (Europa Room)	MON.E2	HD Monitor #2 (Europa Control Room)
3	CAM.E3	HD PTZ Camera #3 (Europa Room)	MON.E3	HD Monitor #3 (Europa Control Room)
4	SWT.E1	Video Switcher Output #1 (Europa Control Room)	SWT.E1	Video Switcher Input #1 (Europa Control Room)
5	SWT.E2	Video Switcher Output #2 (Europa Control Room)	SWT.E2	Video Switcher Input #2 (Europa Control Room)

6	SWT.E3	Video Switcher Output #3 (Europa Control Room)	SWT.E3	Video Switcher Input #3 (Europa Control Room)
7	SWT.E4	Video Switcher Output #4 (Europa Control Room)	TCNF-C.1	Teleconference Codec Input #1 (Europa Control Room)
8	CAM.M1	SD PTZ Camera #1 (Montessori Room)	TCNF-C.2	Teleconference Codec Input #2 (Europa Control Room)
9	CAM.M2	SD PTZ Camera #2 (Montessori Room)	ENG-CB.1	ENG Connection Box Video Tie #1 (Booth O.A.61)
10	CAM.M3	SD PTZ Camera #3 (Montessori Room)	ENG-CB.2	ENG Connection Box Video Tie #2 (Booth O.A.61)
11	CAM.R1	SD PTZ Camera #1 (Rousseau Room)	ENG-CB.3	ENG Connection Box Video Tie #3 (Booth O.A.61)
12	CAM.R2	SD PTZ Camera #2 (Rousseau Room)	ENG-CB.4	ENG Connection Box Video Tie #4 (Booth O.A.61)
13	SWT.MR1	Video Switcher Output #1 (Montessori & Rousseau Control Room)	VWALL- CB	Video Wall Connection Box Video Tie #1 (Cafeteria O.A.27)
14	SWT.MR2	Video Switcher Output #2 (Montessori & Rousseau Control Room)	MON.MR1	HD Monitor #1 (Montessori & Rousseau Control Room)
15	HD BARS	100% HD Colour Bars	MON.MR2	HD Monitor #2 (Montessori & Rousseau Control Room)
16	SD BARS	100% SD Colour Bars	MON.MR3	HD Monitor #3 (Montessori & Rousseau Control Room)

h) Synchronization and Pulse Distribution

After the intended upgrade, Europa Room shall be in HD-mode, while Montessori and Emile Rousseau - in SD-mode. Consequently, tri-level sync pulses for Europa and black burst signals for the other two shall be provided. As they share the same video router, the two sync pulses should be locked to each other or derived from the same internal time reference. This should be accomplished by one (1) SD/HD-SDI Sync Pulse Generator. Sync pulse distribution shall be accomplished by analogue distribution amplifiers capable of both formats (black burst and tri-level sync). An intergrated or additional test signal generator supplying 100% Colour Bars in both formats is preferred.

Suitable analogue pulses distribution amplifier shall be provided for serving all sync requiring equipment.

Core specifications follow:

Internal Time Reference Accuracy	1.0×10^{-6} (accepted) / 1.0×10^{-7} (preferred)
Internal Time Reference Drift	Less than 1 ppm/year
Sync Output	2x Black burst and 2x Tri-level Sync
Video format	576/50i, 720/50p, 1080/50i
Test Patterns (preferred)	100% SD Colour Bars and 100% HD Colour Bars
Pulse Distribution	2x5=10 Black burst and 2x5=10 Tri-level Sync

i) Teleconference Codec

One (1) teleconference codec of HD video quality shall be provided. It shall be suitable for rack mount installation in Europa control room and shall be connected with the Video Router (see relevant table in §4.2.B1g).

Type	Point-to-Point and Point-to-Multipoint
Conference Video-Audio Stream (Bilateral)	1x @ 720p50 or 1x @ 1080p25 plus 1x Stereo Audio
Presentation Video Stream (Unilateral)	1x 1080p or 1x 1920x1200 (WUXGA) @ up to 30fps
IP Bandwidth	6 Mbps (point-to-point) H.323 and/or SIP 10 Mbps total Multipoint bandwidth
Video Compression Standards	H.261, H.263, H.263+, H.264, H.239
Audio Standards	G.711, G.722, G.722.1
HD Video Inputs	2x HD-SDI @ 1080p25 / 720p50
HD Video Outputs	2x HDMI/DVI-I/both @ 1080p25 / 720p50
Audio Inputs	2x Balanced XLR
Audio Outputs	2x Balanced XLR
LAN	1 GigE
Control	SNMP, Telnet, SSH

j) Interfacing Peripherals

- **Video Resolution to SDI A/D converter-scaler**

Two (2) converters shall be provided for converting any analogue video resolution originating from a PC (i.e. from plain VGA to WUXGA 1920x1200) to SD-SDI format (for the Montessori-Rousseau configuration) or HD-SDI format (for Europa) in order to integrate the two (2) existing matrix switchers (Extron CP84HV) into the system.

Core specifications follow:

Input Video Formats	SVGA, XGA, WXGA, WXGA, SXGA, WXGA, SXGA+, UXGA
Output Video Formats	SD-SDI: 576i25 and HD-SDI: 720p50, 1080i50
Frame Rate Conversion	60Hz to 50Hz
Sync In	Yes
External Control	RS-232 or USB or Ethernet

- **HDMI to HD-SDI converter**

Two (2) HDMI to HD-SDI converters shall be provided in order to ensure interfacing between the Teleconference codec outputs and Video Router inputs. In the case that the tendered Teleconference codec implements HD-SDI outputs by default, these converters become redundant and shall not be tendered.

- **PAL to HD-SDI converter**

Two (2) PAL to HD-SDI converters shall be provided in order to ensure interfacing between the existing camera controllers of Montessori and Emile Rousseau rooms and the tendered multi-format switcher (see §4.2.B1c). Mini converters are acceptable as long as they are firmly installed by means of rack mount accessories or trays.

- **D/A SDI to RGBHV/VGA (HD-15pin) converter**

One (1) SDI to RGBHV/VGA (HD-15pin) converter shall be provided in order to ensure interfacing between existing Sony VPL-X1000E projector (re-used in Emile Rousseau) and the multi-format switcher of §4.2.B1c. In case the switcher has an analogue DVI output, a cable adapter will be used and the converter becomes redundant and shall not be offered. Mini converters are acceptable as long as they are firmly installed by means of rack mount accessories or trays. Specifications follow:

Input Video Formats	SD-SDI: 576i25
Output Video Formats	RGB 720x576 (accepted) / RGB 640x480, 800x600, 1024x768, 1280x1024 (preferred)

- **HD-SDI Video Distribution Amplifier**

Two (2) video distribution amplifiers should be provided for handling SD, HD and 3G-SDI video signals. They shall provide at a minimum 4 outputs. Mini converters are acceptable as long as they are securely installed by means of rack mount accessories or trays.

Video Signals Format	SD, HD and 3G-SDI (automatically recognized)
Signal Conditioning	Automatic EQ and re-clocking

4.2.B2 Europa Video Relay Infrastructure for Cafeteria Video Wall Future Installation.

Cedefop intends to install a large video wall in the cafeteria informing the staff about events that will be held in Europa. To achieve this, one termination box shall be provided to terminate all necessary video, audio and network signals. The proposed cable route (see drawing TS-VID.04 in Annex 2 follows existing trunks installed in the basement to bridge Europa's control room with the cafeteria. The tenderer may use alternative route if he finds it more convenient.

The position of the termination box (VWALL-CB: Video Wall Connection Box) is in the area denoted as O.A.27, at the wall behind the reception desk.

It shall provide the following connections and tie lines:

- Five (5) video tie lines, to facilitate video signals from RGBHV to DualLink A/B formats. One Video Router output is routed to a video tie.
- One (1) antenna connector for television reception.
- Two (2) audio tie lines for active audio speakers.
- Two (2) Ethernet connections.
- Two (2) Serial Control connections.

A detailed description of the box and its interconnections can be found in Annex 2: drawings TS-VID.04, 05 and 06. The depicted cable routing, front panel layout and enclosure dimensions are informative and not binding for the tenderer.

The enclosure shall be manufactured from 1mm galvanized sheet steel with electrostatic powder coat finish to match the adjacent environment. It shall have a hinged outer locking door and an inside front panel manufactured from 3mm anodized aluminium sheet. The panel shall be populated with professional quality chassis connectors according to the relevant drawings and following table:

INDEX	TYPE OF CIRCUIT	QTY	CHASSIS CONNECTOR	TYPE	CABLE TYPE
1	VIDEO TIE	5	BNC	F-F ADAPTOR ISOLATED	COAXIAL
2	TV ANTENNA	1	F-TYPE	F-F BULKHEAD ADAPTOR	COAXIAL
3	AUDIO TIE	2	XLR 3-PIN	MALE	2-PAIR AUDIO
4	ETHERNET	2	RJ-45	TWIN SOCKET	UTP 4-PAIR
5	SERIAL CONTROL	2	RJ-45	TWIN SOCKET	UTP 4-PAIR

4.2.B3 Portable Teleconference System

Cedefop faces the need to hold teleconference meetings in a number of spaces within its premises (see §3.2 rooms b, c, d and e). Three (3) existing teleconference sets will be reused leaving space for one (1) new to sum up to four (4). The tenderer shall offer a portable full HD teleconference system, comprising:

- One (1) hardware Codec
- One (1) Camera
- One (1) large Monitor with the option for a second one
- One (1) Microphone with the option for a second one
- One (1) small portable trailer on casters for installation and portability purposes

a) Teleconference Codec

The specifications for this codec are the following:

Type	Point-to-Point
Conference Video-Audio Stream (Bilateral)	1x @ 720p50 or 1x @ 1080p25 plus 1x Stereo Audio
Presentation Video Stream (Unilateral)	1x 720p (WSXGA: 1280x768 or better) @ 25 or 30fps
IP Bandwidth	6 Mbps (point-to-point) H.323 and/or SIP
Video Compression Standards	H.261, H.263, H.263+, H.264, H.239
Audio Standards	G.711, G.722, G.722.1
HD Video Inputs	2x camera compatible, 1x PC compatible
HD Video Outputs	2x DVI-I for up to 2 monitors
Audio Inputs	2x Microphone, 1x Stereo Line
Audio Outputs	1x Stereo Line
LAN	Ethernet 10/100 Mbps
Control	Wired: Web based, SNMP, Telnet (2 out of 3) and Wireless: Infrared remote control

b) Teleconference Camera

One (1) camera compatible with the teleconference codec shall be provided complying with the following specifications:

Technology	1/3" CMOS
Video Resolution	1920x1080p25 / 1280x720p25

Pan	+90°/-90°
Tilt	+15°/-15°
Zoom	12x
Horizontal field of view	70°
Control	Automatic focus and iris control

c) Teleconference Monitor

One (1) large flat screen monitor shall be provided of true HD quality. The basic offer shall be for 1x 50". Core specifications follow:

Technology	LCD / TFT
Video Resolution	1920x1080
Brightness	50" 500 cd/m ² , 42" 400 cd/m ²
Digital Video Input	DVI-I or HDMI

d) Teleconference Microphone

One (1) boundary microphone shall be provided, similar to that requested in §4.2.A4c, to serve the teleconference meetings with an option for a second one.

e) Teleconference Portable Trailer

One (1) trailer for installation and portability purposes of the teleconference system shall be provided. It shall be made of aluminium and bear heavy-duty casters with breaks. It should have universal mounting base(s) for the monitor(s), 1x 50" or 2x 42".

Non-mountable equipment (e.g. microphones, remote controls etc.) and connection cables shall be stored in suitable drawers or other type or storage space.

It shall have appropriate type and number of mains distribution units to accommodate all equipment installed in the trailer.

4.2.C Lighting Installations

The new lighting installations in Europa room are divided in two categories:

- Physical Room Darkening, comprising all necessary modifications regarding the curtains/blinds installed in Europa room for the dimming of the natural light;
- Artificial Lighting Enhancement Installation, comprising a lighting bridge and spotlight fixtures for the president's row.

4.2.C1 Physical Room Darkening

As depicted in drawings TS-LIT.01 and 02 of Annex 2, the projection screen in the room shall be installed directly in front of a wide and high glass facade comprising fixed glass window panels, covering a total area of 10, 4x4, 6m. There are two (2) glass emergency doors (1,65x2,40m) on each end of the facade, leading to the outside area.

The architectural design shall provide suitable motorized blinds for room darkening. The system shall fulfil 3 basic requirements:

- (i) The emergency exits shall not be obstructed at any time;
- (ii) The room darkening shall achieve illumination ≤ 4 Lux on all projection screen area with maximum outside sunlight (noon, summertime);
- (iii) The installation shall be of high aesthetical design, especially in regard to mechanism concealment.

The new system shall comprise two (2) parallel blinds as follows:

- The **outer blind** (closer to the window) shall provide room darkening (Blackout, 0-1% openness), vertically guided via channels on each side, according to the facade aluminium framing (module width approx. 1, 70). Six (6) such blinds shall cover the full width of the facade. The four (4) central ones shall extend from facade top to the floor (total height 4,5m approx.) with hem bar. The two (2) side sections shall extend from facade top to the upper sill of the emergency exits (total height 2,1m approx) with hem bar. The channels shall be made of aluminium, have the same colour finish as the facade frame and provide a sunlight seal via brushes. Preferably, the surface towards the sun shall be reflective in order to save air-conditioning costs. The surface towards the room shall be of a texture and colour to blend with the room and be comfortable to the eye.
- The **inner blind** shall function as a sunshade and has to be freely suspended having the same structure as the outer one. Fabric texture and colour shall match the outer blind.

Both motorized mechanisms will be housed into the same enclosure, which shall be hidden within the suspended ceiling void space. Outer blinds shall be independently operated from the inner ones.

In order to make the exit doors lightproof, the same principle shall apply but with the outer blind only. Jamb mounted channels at each doorframe shall be provided for four (4) pieces 0,70x2,30m with individual slim line roll and motor enclosures.

The motorized operation in all cases shall be silent (NC45).

The shade cloth shall comply with the following specifications:

Material	Polyester core of Fibre Glass core (no PVC)
Colour Endurance	5-year warranty against colour fading
Fire Rating	Fire redundant (Fire Code Approved)
Width x Length	1,70 x 4,50 (no seam allowed)

The contractor must include detailed drawings, especially regarding the modifications in the false ceiling in order to integrate the driving motors and drums mechanisms, access for maintenance, electrical wiring diagrams with end switches and small samples of the two shade cloths.

4.2.C2 Artificial Lighting Enhancement Installation

Spot lighting shall be provided in order to improve the lighting conditions at the president's row in Europa room. The location of the president's row is just in front of the glass façade and poses a constant lighting problem: when the curtain blinds are withdrawn (open), the background illuminance (i.e. the outside area) is at a higher level than that of the people (contre lumière = against the light). When the curtain blinds are deployed (closed), the people are dimly lit due to the fact that the ambient light should be kept at a low level for projection needs. In either case, this is irritating for the observer and most importantly, problematic for the camera which does not have the dynamic range of the human eye.

The new lighting system shall comprise:

- a) One (1) ceiling suspended lighting bridge
- b) Six (6) Fresnel Spot Lights 500W - 650W
- c) One (1) 12-channel electronic digitally controlled dimmer.

a) Lighting Bridge

One (1) lighting bridge made of aluminium truss shall be provided in Europa room for supporting the six (6) spotlights and the two (2) projectors. It shall be a welded construction of triangular shape with side dimension of 20–25cm (8"-10"). It shall have a total span of 6m. It shall be installed so that the triangle base faces the ceiling and be equipped with 12 dimmable mains outlets (Schuco type) for the lights and 2 non-dimmable for the projectors. Also it shall be provided with 4 connectors for DMX-512 control (e.g. XLR 5-pin female) and 4 connectors RJ-45 (Neutric EtherCon type) for Ethernet controlled luminaries. The connectors shall span all over the truss length and be firmly attached to the top rear bar (facing the main entrance, see Annex 2 of the TS - drawing TS-LIT.01). All needed cables shall be internally routed. External finish colour shall match Europa's ceiling.

Core requirements are as follows:

Type	Triangular
Material	Aluminium
Dimensions	20-25cm (8-10 inches)
Length	6m
Uniform Load capability	100kgr/m

The truss shall be suspended by means of four (4) metal tubes (Φ50mm approx.) which are to be mounted onto the concrete beams running along the room (from the entrance up to the glass façade). This will provide a firm and secure mounting of the truss. Drawings TS-LIT.01 and 02 in Annex 2 of the TS provide the possible way of mounting. The selected Contractor may need to use a scaffolding, and if needed he has to foresee this as a cost.

b) Spotlights

Six (6) fresnel-type suspendable spotlights shall be provided from the lighting bridge.

Core requirements are as follows:

Lamp Wattage	500W – 650W
Narrowest Spot Angle	6° - 12°
Spot/Flood Adjustment	Yes

Throw distance	Approx. 5m – 6m
Beam Diameter	0,4m – 0,9m
Illumination capability	Approx. 2.000 Lux at beam centre at throw distance
Colour	Preferably White

c) Dimmers

One (1) 12-channel electronic digitally controlled lighting dimmer shall be provided. It shall be designed for rack mount installation, allow for 1-phase or 3-phase mains connection and shall provide individual control of each dimmer using the DMX-512 protocol. The Contractor shall interconnect the dimmers with the existing Lite-Putter CX-12 Lighting Console.

Main specifications follow:

Type	Digital
Power	12x 2.3kVA
Protection	12x 10A MCB (Miniature Circuit Breaker)
Control Channels	12 channels control
Protocol	DMX-512

4.2.C3 General Lighting Control from within the room (for cleaning purposes)

The general lighting of Europa room is dimmable via existing dimmers. Presently, they are controlled only from the control room. One (1) remote control switch shall be provided within Europa room for the use of the cleaning service beyond office hours. The switch shall be wall mount close to the entrance, access controlled by key and its sole function shall be to turn the lights on and off. The Contractor shall provide all necessary wiring and interfacing with the existing dimmers.

SECTION 5

5. SUPPORTING SERVICES

5.1 Project Documentation

During acceptance and handover phase of the contract implementation two printed and bound copies of the project documentation (in A4 size, with larger sizes folded) where applicable, and a master copy on CD-ROM in English shall be submitted by the selected contractor to Cedefop. It shall include:

- Manufacturers' manuals, including Operation and Maintenance;
- Proof of equipment registration with the manufacturer and warranty;
- Technical descriptions, 'As-built' drawings with cabling routes, wire lists, colour-coding, etc. and systems design records, equipment schedule and specifications;
- Full details of custom-built and modified equipment sufficient to allow others to provide complete support for the system;
- Test results, commissioning records and system configurations including programming;
- Software backups;
- Administrators' access usernames and passwords.

Electronic Documents shall be submitted in the following formats:

- Microsoft Office 2003 or 2010 – Word, Excel, PowerPoint electronic files;
- Microsoft Project 2003 or 2010;
- Computer Aided Drawing – with file extensions *.dxf, *.dwg (AutoCAD-LT 2009);
- Adobe Acrobat - *.pdf (readable by Acrobat Reader v8.0 and later);
- Compressed files - *.zip (e.g. by Winzip application);
- Graphics files – with file extensions *.jpg, *.gif, *.tif, *.bmp;
- Portable media – CD-ROM, CD-R, DVD-ROM, DVD±R.

5.2 Facilities Staff Training

The selected contractor shall provide training for all commissioned systems. The training shall include a hands-on learning under the guidance of the tutor. It shall be conducted at Cedefop premises prior to the start of operational use of the system.

Full systems' training shall be provided for the Facilities staff (up to 3 persons) for a total of 3 work days, in the operation, administration and maintenance of the systems (one day of each). Training conclusion will be during the first actual operational use of each system under real (not simulated) conditions where the qualified tutor appointed by the contractor should attend and evaluate the performance of the operators. His evaluation must be submitted in writing to Cedefop.

5.3 Acceptance tests

Acceptance tests shall be performed by the selected contractor in front of an Acceptance Committee that will be set up by Cedefop for this reason.

The acceptance tests shall be divided into 3 groups:

- **Quantitative Checks:** These checks aim at proving that all specified quantities have been delivered and installed.
- **Qualitative Tests:** These tests aim at proving that the quality of the installations corresponds to the Technical Specifications/ Contract. The Acceptance Committee will have the right to ask for

precise measurements if the first impression is not fully satisfactory. In such case the selected contractor will be obliged to bring the suitable test equipment for performing these measurements. As an example, the following test instruments should be used:

- Precision Sound Analysers;
- Grade A Sound Level Meters;
- Digital Video Generators and Analysers;
- Network Analysers;
- Light Meters.
- **Functionality Test:** These tests aim at proving that all functionality requirements set by these technical specifications have been accomplished.

Finally, the Acceptance Committee will prepare a report to the Contractor stating their decision ranging as follows:

- Full or Unreserved Installation Acceptance or
- Partial or Under-terms Acceptance. Needed remedial actions by the selected contractor for lifting any reservations should be clearly mentioned, or
- Installation Rejection with detailed reasons provided for such decision.

The abovementioned report with any measurement or other protocols will be submitted to the Contractor.

5.4 Post Commissioning

5.4.2 Warranty

The selected contractor shall provide a minimum of one year full warranty maintenance after the completion and the acceptance of the systems and their installation + 2 years max. for the provision of preventive and corrective maintenance. If the tenderer offers more than one year warranty, then the remaining 2 years for the provision of preventive and corrective maintenance will be detracted accordingly.

While the systems may be installed and tested in stages, due to the large size of the project and the staggered process for completion, the warranty period shall start when each system or subsystem is installed, commissioned, accepted as fully operational by Cedefop and a relevant handover protocol is mutually signed. Periods prior to the protocol signing shall be considered as testing or burn-in and discounted from the warranty period.

Any equipment failure, in whole or part, within the above specified warranty period shall be exchanged with a brand new one and not be repaired. Being understood as an integral part of the warranty, any hidden defects of whatsoever nature shall be repaired/corrected free of any charge to Cedefop.

5.4.3 Call service

The contractor shall provide Cedefop's responsible staff with a telephone and/or e-mail call service for reporting problems and maintenance requests. This service shall be provided by technical support personnel, fully informed and aware of Cedefop systems' details and particulars. Each call should be acknowledged by e-mail within one hour during 9:00am – 5:00pm on working days and within the next first working hour. This e-mail should also specify response time and intended line of action. Maximum response time must not exceed the noon of the second working day from initial call by Cedefop. In cases of emergencies or extreme urgencies, a competent system service engineer shall also be available for telephone support during non-working hours. This service shall start from the acceptance of the installation of the AV systems and will last until the expiry of the warranty period.

5.4.4 Consumable Items & Spare Parts

The tenderer shall submit a pricelist for the replacement of consumable items excluded from the warranty (e.g. video projector lamps exceeding their hour rating). Any item not included in the list, will not be considered as consumable and thus should be covered by the warranty.

A pricelist of anticipated spare parts shall be provided for maintenance use after the expiry of the warranty period. The selected contractor shall ensure availability of sufficient mission critical spare parts for seven (7) years according to European Union regulations. When replacement items must be procured the repair period shall be no longer than five (5) working days from initial call by Cedefop to the contractor.

5.4.5 Preventive and Corrective maintenance

Tenderers shall also indicate the location of their technicians who will be in charge for the systems described in this document. During the warranty period (min. 1 year) and for the following three years (max.) up to 10 preventive maintenance visits shall be made per calendar year. Routine maintenance activities shall be broken down to form a schedule of works equivalent to a twice-a-year full-service regime.

At least three members of the contractor's service and maintenance engineering team shall become familiar with all aspects of the systems. Each member of the contractor's service and engineering team have to conduct the preventive maintenance visits at least every six months, thus ensuring that up-to-date system experience is not carried solely by one engineer (to avoid the creation of potential knowledge gap in case a member of the engineering team leaves the contractor).

Firmware and software upgrades shall be performed during the first or second scheduled maintenance visit after their official release date.

The labour for corrective maintenance (i.e. rectifying faults or defects) and also that for small scale modifications and upgrades shall be included in the annual lump sum offered for maintenance beyond warranty period (see §2.1). Any necessary spare parts could eventually be charged separately only after Cedefop's approval.

3. Specific information concerning participation to this tender

3.1. Exclusion criteria

Participation in this tender is open only to tenderers who are in a position to subscribe in full to the Declaration on Exclusion Criteria and absence of conflict of interest, given in Annex C. Therefore all tenderers, all group (consortium) members (if any) and any subcontractor(s) (identified as per the two bullet-points in the fourth paragraph of point 4.2 below) **MUST** provide the self-declaration found in Annex C duly signed and dated. The exclusion criteria will be assessed in relation to each company individually.

Cedefop reserves the right to check the situations described in points c) and f) of the Declaration.

In the event of recommendation for contract award, point l) of Annex C will apply.

3.2. Selection criteria

The selection criteria concern the tenderer's capacity to execute similar contracts.

The tenderers must submit documentary evidence (or statements, where required) of their economic, financial, technical and professional capacity to perform this contract.

Each and all requirements for economic and financial capacity should be fulfilled by the tenderer - alone (in the case of single tenderers) or as a whole (in case the tenderer is a grouping/ consortium). Participation in tendering is open to all legal persons bidding either individually or in a grouping (consortium) of tenderers.

An economic operator may, where appropriate and for a particular contract, rely on the capacities of other entities, regardless of the legal nature of the links which he has with them. He must in that case prove to the contracting authority that he will have at his disposal the resources necessary for performance of the contract, for example by producing an undertaking on the part of those entities to place those resources at his disposal. This obligation may be fulfilled by presenting statements from those entities or the consortium agreement.

3.2.1. Economic and Financial capacity

The tenderer must be in a stable financial position and have the economic and financial capacity to perform the contract.

Requirements:

- The **average annual turnover** of the tenderer (of a single company, or of the consortium as a whole, if any) **for the last three financial years concerning similar type of projects** (similar supplies and services) to those covered in this call for tenders should be at least **300,000 €**.

Proof of economic and financial capacity **must** be furnished by the following documents:

- Signed Statement (Please fill in and sign your Statement in Questionnaire 2 of Annex G) of the tenderer's **turnover for the last 3 (three) financial years concerning the type of supplies and services similar in nature to those making the subject of this call for tenders**.

In the event of recommendation for contract award, the winning tenderer (single tenderer or in the case of a consortium (grouping) each member of the consortium) will be requested to prove the above by submitting Audited Financial Statements (Audited Profit and Loss Account/Statement or equivalent) if these are foreseen by the applicable national legislation. Should total subcontracting exceed 40% of the work by value, Cedefop reserves the right to request audited financial statements also from the subcontractors. For tenderers or sub-contractors (identified as per any of the two bullet-points in paragraph 4 of Art. 4.2 below) who are natural persons / freelancers, a tax declaration and tax clearance statement for the last three financial years will be requested.

If, for some exceptional reason, the winning tenderer (or any consortium member or sub-contractor) is unable to provide one or other of the above documents, he or she will be required to justify the non-provision and may prove economic and financial capacity by any other document which Cedefop considers appropriate. Cedefop reserves the right to request any other document enabling it to verify the winning tenderer's economic and financial capacity.

3.2.2. Technical and professional capacity

Requirements for Technical and Professional capacity:

The Tenderers are required to have sufficient technical and professional capacity to perform the contract. To that effect, the tenderer must:

- Be enrolled in the relevant professional register;
- Have adequate structure and resources (trained and certified technical staff) to deliver the supplies and perform the services as specified in the Technical Specifications;
- In the past three (3) years have performed and completed (by the date of submission of offers) at least 3 contracts similar to the scope, size (i.e. invoiced financial value) and nature of the supplies and services provided as those required in this call for tenders;
- Have in place and operate under a relevant to the subject of the contract functional Quality Management System (this requirement applies also to possible subcontracting);
- The Tenderer's team of experts, who will be proposed to implement the contract (minimum 2 experts – a Project Manager and a Specialist, proposed by the tenderer, whose involvement will be crucial for performing the contract), must have the relevant to the subject of the profiles, knowledge and experience for the successful implementation of the contract, namely:
 - For each of the two experts (the Project manager and the Specialist) - University degree, in audio-video and/or conference infrastructures systems;
 - For the proposed Project manager - Minimum 10 years' experience in similar projects (audio-video and conference infrastructures systems);
 - For the proposed Specialist - Minimum 5 years' experience in similar projects (audio-video and conference infrastructures systems);
 - For each of the two experts (the Project manager and the Specialist) - Very good communication skills (spoken and written) in English.

Proofs / Evidences of Technical and Professional capacity

The following documents or information must be presented by the tenderer to prove his technical and professional capacity to perform the proposed contract:

- Copy of an official Document for enrolment in the relevant professional register, as prescribed by the laws of the Member State, where the tenderer is established;
- Detailed company profile demonstrating the ability to implement projects/contracts similar to those described in this call for tenders (Annex G, Questionnaire 4);
- List of at least 3 contracts performed in the past three (3) years similar to the scope, size and nature as those required in this call for tenders, describing the contracting authorities, the subjects, the amounts (i.e. the invoiced financial value), the dates, and the percentage performed by the tenderer (Annex G – Questionnaire 3);
- Copy of the relevant valid certification (ISO 9001:2000 or equivalent) of the quality management system of the tenderer and of the subcontractor/s (if any);
- The detailed CVs of the experts (minimum two (2) – a Project Manager and a Specialist) who will be proposed to implement the contract, in particular of the persons whose involvement will be crucial for performing the contract. The CVs must clearly indicate the education, experience and the level of linguistic ability for the required language(s).

In case of consortium or subcontracting, the consortium or the tenderer with all subcontractors together have to provide evidences of technical and professional capacity as a whole (please see also 4.1 and/or 4.2 below)– with the exception of the Quality Management System, that must be operated by **all** involved.

3.3. Legal Position

Tenderers may choose between submitting a joint offer (see 4.1) as a Consortium/Grouping or introducing a bid as a single tenderer, in both cases with the possibility of having one or several subcontractors (see 4.2). Whichever type of bid is chosen, the tender must stipulate the legal status and role of each legal entity in the tender proposed. To identify themselves, tenderers must complete a Legal Entity Form found in **Annex D**, which must be accompanied by all documents and information indicated in the form. Tenderers are also requested to complete the relevant forms (tables) in **Annex G**.

The Legal Entity Form (Annex D) should be completed and signed by the representative(s) of the tenderer (who sign(s) the cover letter as per point 4 of the Invitation to tender) authorised to sign contracts with third parties.

The Legal Entity Form should not be submitted by sub-contractors (if any).

4. Additional information concerning participation to this tender

Participation in Cedefop tendering procedures is open on equal terms to all natural and legal persons or groupings of such persons (consortia) falling within the scope of the Treaties. It includes all economic operators registered in the EU and all EU citizens. Pursuant to Article 106 of the general Financial Regulation participation is also open to all natural and legal persons from non-EU countries that have a ratified agreement with the European Union in the field of public procurement on the conditions laid down in that agreement. Cedefop can therefore accept offers from and sign contracts with tenderers from 34 countries, namely: the 27 EU member States, 3 EEA Countries (Lichtenstein, Norway and Iceland) and 4 SAA Countries (Croatia, FYROM, Albania and Montenegro). The procurement (tender) procedures of Cedefop are not open to tenderers from GPA countries.

A natural or legal person can take part (as an individual tenderer or as a member of a consortium submitting a tender) in only one tender. In the opposite case, all tenders in which that person has participated may be excluded from the evaluation.

4.1. Joint Offers/ Groupings (Consortia)

Groupings (consortia), irrespective of their legal form, may submit a tender on condition that they comply with the rules of competition. A consortium may be a legally-established permanent grouping, or informally constituted group of tenderers submitting an offer (joint offer) for a specific tender procedure.

Cedefop does not require consortia (if any) to have a given legal form in order to submit a tender, but reserves the right to require a consortium to adopt a given legal form before the contract is signed (if this change is necessary for proper performance of the contract). This can take the form of an entity with or without legal personality but offering sufficient protection of the contractual interests of Cedefop.

If awarded the contract, the tenderers of the group (consortium) will have an equal standing towards Cedefop in executing it.

A grouping (if any) of firms must nominate one party to be responsible for the receipt and processing of payments for members of the grouping, for managing the service administration, and for coordination.

Tenders submitted by consortia of firms must specify the role, qualifications and experience of each member or of the group (please fill in the relevant Questionnaires in Annex G).

Each member of the group (consortium) must provide the required evidence for the exclusion and selection criteria. Concerning the selection criteria, the evidence provided by each member of the group (consortium) will be checked to ensure that the consortium as a whole fulfils the criteria.

The offer has to be signed by all members of the group (consortium). However, if the members of the group so desire they may grant an authorisation to one of the members of the grouping (consortium). In this case they should attach to the offer a power of attorney (see model in Annex I) authorising this company or person to submit a tender on behalf of the grouping (consortium). For groupings not having formed a common legal entity, Annex I, model 1 should be used, and separate legal entity forms (see point 3.3 and Annex D) should be completed and signed by all members. For groupings with a legal entity in place, Annex I, model 2 and one legal entity form (see point 3.3 and Annex D) should be completed and signed only by the single representative of the consortium.

The contract will have to be signed by all members of the group (consortium). If the members of the group (consortium) so desire, they may grant authorisation to one of the members of the grouping by signing a power of attorney. The same model as above, duly signed and returned together with the offer (Annex I), is valid also for signature of the contract.

Partners in a joint offer assume joint and several liability towards Cedefop for the performance of the contract as a whole.

4.2. Subcontracting/Subcontractors

Subcontracting is defined as the situation where a contract has been or is to be established between Cedefop and a contractor and where the contractor, in order to carry out that contract, enters into legal commitments with other entities for performing part of the service. If awarded, the contract will be signed by the selected tenderer (the Contractor), who will be vis-à-vis Cedefop the only contracting party responsible for the performance of this contract. Cedefop has no direct legal commitment to the subcontractor(s).

The contractor retains full liability towards Cedefop for performance of the contract as a whole. Cedefop will treat all contractual matters (e.g. payments) with the contractor, whether or not some tasks are performed by a subcontractor. Under no circumstances can the contractor avoid liability towards Cedefop on the grounds that the subcontractor is at fault. Any subcontracting/subcontractor must be approved by Cedefop, either by accepting the bidder's tender, or, if proposed by the Contractor after contract signature, in writing by an exchange of letters. In the latter case, the subcontracting/subcontractor will be accepted only if it is judged necessary and does not lead to distortion of competition.

Tenderers are free to choose their subcontractors from both eligible and non-eligible countries. Thus, in principle all economic operators can act as subcontractors of eligible tenderers. However, the subcontracting of persons/economic operators from non-eligible countries is limited to a maximum of 30% of the work by value.

The tenderer must clearly indicate the identity of each subcontractor and the percentage of work by value that he will perform for this contract (please fill in Annex G).

Only in cases when:

- a subcontractor undertakes between 10% and 40% of the work by value,
- the total subcontracting is above 40% of the work by value, independently of the individual subcontractor's contribution to the work by value,

the tenderer should submit with the offer:

1. the Declaration on exclusion criteria and absence of conflict of interest (Annex C) filled-in and signed by the relevant subcontractor;
2. the required documents to prove the economic/financial and technical/professional capacity of the subcontractor as described in points 3.2.1 and 3.2.2;
3. the Form in Annex J (Model of Letter of Intent for Subcontractor(s)) duly filled-in and signed by each subcontractor, stating his or her unambiguous undertaking to collaborate with the tenderer if the latter wins the contract. The roles, activities and responsibilities of the subcontractor(s) should also be stated and the extent of the resources that the relevant subcontractor will put at the tenderer's/contractor's disposal for the performance of the contract.

N.B. The subcontractor(s) (if any) have to provide the documents to prove their capacity only for the parts of the contract that are relevant to them. The evidence provided will be checked to ensure that the tenderer with the subcontractor(s) all together fulfil the criteria.

Where no subcontractor is given (meaning that possible individual subcontracting is below 10% by value and total subcontracting does not exceed 40%), the work will be assumed to be carried out directly by the tenderer (single tenderer or group of tenderers (consortium)).

5. Award of the contract

The evaluation will proceed in stages, as described below. Only the offers meeting the requirements of every stage will pass on to the next stage of evaluation:

a) Only the tenders meeting the requirements of the exclusion and selection criteria will further be checked for technical compliance of the proposed supplies, equipment and software;

b) Only the tenders offering equipment functionalities and characteristics and services fully compliant to the obligatory minimum specified in Annex K will be evaluated for quality and price – see description of the process in point 5.2 below.

The contract shall be awarded to the tenderer submitting the tender that offers the best-value-for-money as represented by the highest Total Score (TS) out of 100.

The Total Score (TS), comprising quality + price score, will be calculated for each tender by applying the formula below:

$$\text{Total Score (TS)} = X * (\text{TQV} / 100) + Y * (\text{Cheapest TFO} / \text{TFO})$$

Whereby:

TQV = Total Quality Value of the tender, obtained as per point 5.1;

TFO = Total Financial Offer of the tender (as per point 5.4);

X is the weighting for quality score and for this tender procedure it is fixed to **60**;

Y is the weighting for price and for this tender procedure it is fixed to **40**.

Cheapest TFO is the Cheapest Tender Price of a technically compliant tender (i.e. among those having achieved a minimum of 50% of the possible score for each award (evaluation) criterion and a minimum of 60 out of 100 points (TQV) in the technical evaluation – see point 5.1 below).

5.1. Technical evaluation

The assessment of the technical quality will be based on the ability of the tenderer to meet the purpose of the contract as described in the tender specifications.

The Evaluation Committee will first use a Technical Compliance Evaluation Grid to evaluate/ check each offer for compliance with the specified in the Technical Specifications (point 2 above) and in Annex K minimum Technical Requirements/ Characteristics/ parameters of the offered equipment, other supplies, functionalities/services.

Only the tenders offering the necessary equipment, other supplies, functionalities /services fully technically compliant with the fixed minimum requirements and technical characteristics as per Annex K (Technical Proposal – Equipment, Software and other supplies), will be accepted for evaluation of quality, according to the Award criteria given in the table below. In other words, the award criteria below will be applied only to the tenderers who have obtained as a minimum “YES” (i.e. Comply – C) in each and every line of the Technical Compliance Evaluation Grid in Annex K.

All tenders qualified as acceptable as per Annex K will also be subject of evaluation (graded clauses) as per Annex L (for Award criterion 2.1 below).

The following Award Criteria will be applied to this tender procedure:

Award criteria	Maximum number of points
(1) ORGANISATION AND METHODOLOGY	40

1.1. Methodology and project plan for the installation of the systems	30
1.2 Adequacy of training	10
(2) QUALITY ASSURANCE AND RISK ASSESSMENT	60
2.1 Tenders offering solutions above the minimum requirements listed in <i>ANNEX L</i> will receive higher scores	40
2.2. Function and role of designated Project Team	10
2.4. Adequate consideration of possible hindrances	10
Overall total score	100

For the technical evaluation of the offer against the award (technical) criteria mentioned above, the tenderer must provide documentation relating to:

For award criterion 1.1:

- a detailed description of the methodological approach illustrating intended organisation and management of the tasks, including: management of the project; description of the overall work plan, the organisation of the steps and activities to be performed for the services under the technical specifications; quantitative description of workload, measures for ensuring comfort of work (e.g. noise & dust); proposal of a detailed ‘Work management schedule’ (timetable with descriptions of the deliverables) table.

For award criterion 1.2:

- a detailed description of the training plan for the Facilities staff: the way custom training will be organised, the team involved in these tasks, timetable, content outline and materials that will be provided, contingency plans, assessment of training results.

For award criterion 2.1

- tenders offering solutions above the minimum requirements listed in ANNEX L and defined as ‘preferred’, will receive a higher score (40/100). A ratio 1:10 will be used, i.e. the scores obtained by the tenderers from Annex L will be divided by 10 (the max. 400 score that could be obtained in annex L will be transferred into Award Criterion 2.1 as max 40).

For award criterion 2.2

- allocation and justification of distributing tasks to the project team, analytical description of the project manager’s tasks (availability and daily presence, monitoring, supervision and organising of services, other tasks).

For award criterion 2.3

- assessment of likely difficulties in carrying out the work and methodology for addressing them.

In order to guarantee a minimum threshold of quality, tenders scoring as a total less than **60 points** (of a maximum of 100) against the award (technical) criteria, will not be considered acceptable and will therefore not have their financial proposal evaluated. Also, tenders that do not reach a minimum of 50% of the possible score for each award (evaluation) criterion and sub-criterion will be eliminated from further evaluation.

The tender(s) who meet(s) all (and each) minimum characteristics as per the technical compliance list (Annex K), who have got more than 60 points in total against the Award Criteria for quality and a minimum of 50% of the possible score for each award criterion and sub-criterion, will be considered technically acceptable and will be subject to Financial (Price) Evaluation (5.3).

5.2. Technical proposal

Tenderers are requested to organise the technical offer in headings or to structure it in such a way as to ensure that the content of the technical offer meets the requirements set out in the Technical Specifications as closely as possible and to facilitate the subsequent evaluation of tenders against the technical award criteria.

The tenderer's technical proposal should consist of a clear and comprehensive response to all requirements as per the Technical Specifications in point 2 above providing a practical, detailed description of the equipment and services proposed for successful performance of the contract. It is up to the tenderer to prepare in his Technical Proposal a detailed organisation and methodology such that they fulfil (comply in full with) all requirements outlined in the Technical Specifications.

Annex K

In his technical proposal the tenderer must include a duly filled-in Annex K (Technical Compliance – Equipment, other supplies, functionalities/services) by giving the requested description of the offered equipment, other supplies and tools, functionalities and services that must comply in full to each of the specified minimum requirements and characteristics, parameters, functions. In Annex K, all equipment requirements that are compulsory are denoted with C in the "Type" column. Graded requirements are indicated with the letter G. In the "Description of clauses" column the "Accepted" value always precedes "-Versus (VS)-" and the "Preferred" value is presented last. The tenderer must fill-in either (the applicable) Acc. or Prf. columns with YES or NO for both compulsory as well as graded requirements. The tenders are also required to fill-in Annex L.

Annex L

In his technical proposal the tenderer must include a duly filled-in Annex L (Graded Requirements). In the "Description of clauses" column, the "Accepted" value always precedes "-Versus (VS)-" and the "Preferred" value is presented last. The tenderer must fill in all empty cells in the "Offered Value" column. The maximum scores that can be obtained if the tenderer offers the Preferred value are given in the "Clause Coefficient" column. If the Accepted value is offered, then the clause coefficient (score) will be 0.

In his technical proposal the tenderer should focus on the description of functional/ technical characteristics, duration of warranty for all parts, hardware, and proposed cables' colouring scheme.

The tenderer has to provide also detailed explanations on how he intends to realise the required supplies, and associated services in Cedefop.

The tender's technical proposal shall include a detailed description of the measures foreseen to ensure the quality of the services and the business continuity, as described in paragraph 5.1 above, point 'Award criterion 2'.

In addition to the above the tenderer must clearly specify which parts of the work will be subcontracted (if any) and specify the identity of only those subcontractors undertaking more than 10% of the work by value or of all sub-contractors if total subcontracting is above 40% of the work by value, as requested in point 4.2.

NB: All the information and means of proof provided commit the tenderer (and respectively the contractor) throughout the duration of the contract.

5.3. Financial evaluation

Only tenders that:

- have offered a fully compliant equipment, software, other supplies, functionalities / services and have therefore got only YES for each minimum technical requirement/ parameter (refer to the Technical Specification and Annex K);

- reach a minimum of 50% of the possible score for each award (evaluation) criterion;

and

- score minimum 60 points or more (of a maximum of 100) in total against the award criteria,

will have their Financial Proposal evaluated. The evaluation will be made on the basis of the **Total Price** offered in the Financial Proposal as per point 5.4.

The tender with the lowest Financial Proposal receives 100 points. The others are awarded points by means of the following formula:

Financial score = (cheapest Financial Proposal / Financial Proposal of the tender being considered) Y.*
Y = price weighting, fixed for this tender procedure to 40.

5.3.1. Evaluation of abnormally low prices

If any tender's price appears to be abnormally low in relation to the supplies and the ancillary services offered, and in order to check if the tender can be considered valid, the evaluation committee will, before it may reject this tender, send a request for clarifications to ask for explanations on the components of the tender which it considers relevant to the presumed abnormally low price and shall verify those constituent elements taking account of the **explanations received**. If in that relation the tenderer cannot explain his price on the basis of the economy of the services or supplies offered, or the method used, or the technical solution chosen, or the exceptionally favourable conditions available to the tenderer, the tender will be rejected.

A price will be considered abnormally low if the financial offer of any tenderer is lower with more than the acceptable margin of deviation from the average price of the other technically acceptable offers (please note that definition of which offers are technically acceptable/ compliant is given in points 5, 5.1 and 5.3 above). The actual deviation will be calculated as % as follows:

The difference between the average price of the other technically acceptable offers and the value of the abnormally low financial offer will be divided by the average price of the other technically acceptable offers and the estimated budget (see point 1.5). **The acceptable margin of deviation is set to 50%.**

The approach of the Evaluation Committee to identify and eliminate abnormally low tenders will be the following:

- apply the acceptable margin of deviation from the average price of the other technically acceptable offers + the estimated budget and set aside the offers that go beyond it;
- check if specific notes or specific items included in the offer justify to some extent the deviation, and consider asking on that basis clarification(s) from the tenderer;
- decide on the acceptability of the offer on the basis of the clarification reply received.

5.3.2. Financially unacceptable tenders

Upon conclusion of the evaluation, the committee could find that a tender is unacceptable because the price is abnormally low (see point 5.3.1) or above budget (see point 1.5).

5.4. Financial proposal

The financial offer must be clear and in compliance with the tender specifications.

The Financial Proposal should indicate the total price for the supply, delivery, installation, making operational all the equipment and systems and for carrying out all the activities indicated in the Technical Specifications. The tenderers must duly fill in **Annex H** and present a detailed breakdown of the price offered.

Prices must be quoted in Euro should include all daily expenses, including travel and accommodation expenses. No transportation costs, neither accommodation costs will be reimbursed to the contractor.

Expenses for meetings called by Cedefop, in the context of contract performance, to resolve problems of cooperation (if any) between the two parties or to eventually address repeated shortcomings in the Contractor's obligations, will be at the charge of the Contractor.

The Financial Offers will be checked for any arithmetical errors in computation and summation. Errors will be corrected by the evaluation committee as follows:

- where there is a discrepancy between a unit price and the total amount derived from the multiplication of the unit price and the quantity, the unit price as quoted will be the price taken into account. Tenderers will be requested to confirm in writing the corrected calculation so that it may eventually be included in the contract

5.4.1. Information concerning price

- The prices quoted must be fixed and not revisable for the whole duration of the contract.
- Prices must be quoted in EURO and include all expenses (without VAT).
- Under Articles 3 and 4 of the Protocol on the Privileges and Immunities of the European Communities, Cedefop is exempt from all charges, taxes and dues, including value added tax (VAT). Such charges may not therefore be included in the calculation of the price quoted. The VAT amount must be indicated separately (this only applies to tenderers having their seat in Greece).

6. Information on presentation and content of tender

It is important that tenderers provide all documents necessary to enable the evaluation committee to assess their tender. Tenderers should fully respect the instructions indicated under points 2, 3 and 4 of this open invitation to tender.

In addition, below you will find details of the required documentation.

6.1 Envelope A - Supporting documents

One original signed version and one copy of:

- cover letter, signed by the person/s (name and position) that is/are authorised to sign the contract in case of contract award
- the exclusion criteria declaration requested in point 3.1 and standard template found in Annex C;
- the selection criteria documents as requested in points 3.2, 4.1, 4.2;
- Questionnaires 1 – 4 as found in Annex G;
- Power of Attorney (Model 1 or 2), as required in point 4.1 (if applicable) and found in Annex I;
- Model of Letter of Intent for Subcontractor/s as required in point 4.2 (if applicable) and found in Annex J;
- the Legal Entity Form as requested in point 3.3 and found in Annex D;
- the Financial Identification Form as found in Annex E;
- the checklist found in Annex F.

In the case of tenders submitted by groupings (consortia) or involving contribution by subcontractors, envelope A should also contain all relevant documentation as requested in points 4.1 and 4.2 respectively (with reference to points 3.1, 3.2 and 3.3).

6.2 Envelope B – Technical proposal

One original signed version, three bound copies + Electronic File on a CD of:

- the Technical Proposal (including the Excel tables in Annex K and Annex L duly filled-in) indicating compliance with the requirements of the proposed equipment, systems, installations, functionalities/services and providing all information, models, parameters, methodologies etc as required in point 5.2, as well as any information relevant to subcontracting (if any) as requested in point 4.2.

6.3 Envelope C – Financial proposal

One original signed version and three copies + Electronic File on a CD of:

- the Financial Proposal (the Excel tables in Annex H duly filled-in) containing all information requested in point 5.4.

ANNEX A

CONTRACT NOTICE

(Given as separate file in *.pdf format for information)

ANNEX B

DRAFT CONTRACT

(Given as separate file in *.pdf format for information)

ANNEX C

**Declaration of honour with respect to
the Exclusion Criteria and absence of conflict of interest**

(given as a separate *doc file, to be filled in by the tenderer)

ANNEX D

LEGAL ENTITY FORM

Legal Entity Form to be downloaded, depending on the nationality and legal status of the tenderer, from the following website:

http://ec.europa.eu/budget/contracts_grants/info_contracts/legal_entities/legal_entities_en.cfm

Legal Entity Form to be completed and signed by a representative of the tenderer (group leader in case of consortium, with indication of entity, name and function) authorised to sign contracts with third parties. It should not be signed by sub-contractors (if any).

ANNEX E

FINANCIAL IDENTIFICATION FORM

To be downloaded, depending on the nationality of the tenderer, from the following website:

http://ec.europa.eu/budget/contracts_grants/info_contracts/financial_id/financial_id_fr.cfm

completed and signed by an authorised representative of the tenderer (group leader in case of consortium, with indication of entity, name and function), but not by subcontractors.

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PLEASE NOTE:

Please indicate the BIC (Bank Identification Code) in the REMARKS box of the downloaded form.

ANNEX F

CHECK LIST OF MANDATORY DOCUMENTS

(given as a separate *doc file, to be filled in by the tenderer)

ANNEX G

(given as a separate *doc file, to be filled in by the tenderer)

ANNEX H

FINANCIAL PROPOSAL

(Given as separate EXCEL file, to be filled in by the tenderer)

ANNEX I

POWER OF ATTORNEY (MODELS 1 and 2)

(given as a separate *.doc file, to be filled in by the tenderer (if applicable))

ANNEX J

Model of Letter of Intent for Subcontractor/s

(given as a separate *.doc file, to be filled in by the tenderer (if applicable))

ANNEX K

Technical Proposal – Equipment, installations, functionalities, services

(given as a separate EXCELL file to be filled in by the tenderer)

Annex L

Technical Proposal - Graded Requirements

(given as a separate EXCELL file to be filled in by the tenderer)

ANNEX M

GLOSSARY OF TERMS

Budget breakdown	The schedule which breaks down the contract value according to the different items or services, stating out fee rate, unit prices and lump sums for each item provided (Services, Supplies, Works).
Consortium	A grouping of eligible natural and legal persons or public entities which submits a tender or an application, under a tender procedure or in response to a Call for Tenders. It may be a permanent, legally-established grouping or a grouping which has been constituted informally for a specific tender procedure. All members of a consortium (i.e., the leader and all other partners) are jointly and severally liable to the Contracting Authority (Cedefop).
Contract	• Direct Contract: contract containing all the details necessary to implement it (as opposed to FWC) • Framework Contract (FWC): contract establishing only the general outline of the services or goods to be delivered and requiring an additional step to make the actual purchase • Specific Contract or order form: contract specifying details of a particular task based on the previously signed framework contract • Purchase Order: request for services, supplies or works used generally for procurement of a value below €25 000 as an equivalent to a contract
Contracting Authority	Cedefop
Evaluation committee	A committee made up of an odd number of members (at least three) with the necessary technical and administrative expertise to give an informed opinion on tenders.
Financial offer	The part of a tender which contains all the financial elements of the tender, including its summary budget and any detailed price breakdown or cash-flow forecast required by the tender dossier.
General conditions	The general contractual provisions setting out the administrative, financial, legal and technical clauses governing the execution of all contracts of a particular type.
Open procedure	Calls for tenders are open where all interested economic operators may submit a tender.
Project	The project in relation to which the services/works/supplies are to be provided under the contract.

Project manager	The person responsible for monitoring the implementation of a project/contract on behalf of Cedefop.
Service contract	A contract between a service provider and Cedefop for the provision of services such as technical assistance or studies (SERVICES).
Services	Activities to be performed by the Contractor under the contract such as technical assistance, studies, training and designs (SERVICES).
Special Conditions	The special conditions laid down by Cedefop (the Contracting Authority) as an integral part of the tender specifications (tender dossier), including amendments to the General Conditions, clauses specific to the contract and the terms of reference (for a service contract) or technical specifications (for a supply or works contract).
Successful Tenderer	The tenderer selected at the end of a tender procedure for the award of contract.
Supplier	Any natural or legal person or public entity or consortium of such persons and/or bodies offering to supply products (SUPPLIES).
Supplies	All items which the Contractor is required to supply to Cedefop (the Contracting Authority), including, where necessary, services such as installation, testing, commissioning, provision of expertise, supervision, warranty, maintenance, repair, training and other such obligations connected with the items to be provided under the contract (SUPPLIES).
Supply contract	Supply contracts cover the purchase of products. A contract for the supply of products and, incidentally, for siting and installation shall be considered a supply contract.
Tender	A written or formal offer to supply goods, perform services or execute works for an agreed price and under agreed conditions.
Tender dossier	The set of tender specifications which contains all the documents needed to prepare and submit a tender.
Tender specifications	Document or set of documents giving full details of the conditions, organisation and subject of the procurement procedure (includes technical specifications).
Tender Price	The sum stated by the tenderer in his tender for carrying out the contract.
Tender procedure	The overall process of putting a contract out for tender, starting with the publication of a contract notice and ending with the award of the contract (contract award notice).

Tenderer	A natural or legal person or consortium thereof submitting a tender with a view to concluding a contract.
Technical Specifications	The document drawn up by Cedefop (the Contracting Authority) setting out its requirements and/or objectives in respect of the provision of supplies (or works), specifying, where relevant, the methods and resources to be used and/or results to be achieved (SUPPLIES, WORKS).
Terms of Reference (ToR)	The document drawn up by Cedefop (the Contracting Authority) setting out its requirements and/or objectives in respect of the provision of services, specifying, where relevant, the methods and resources to be used and/or results to be achieved (SERVICES).
Warranty obligations	The warranty of the Contractor towards Cedefop that the supplies are new, unused, without defects, of the most recent models and incorporate all recent improvements in design and materials.

Where Services, Supplies or Works are not specified the definition applies to all types of contracts.