VECOM 4

Annex I

TECHNICAL REQUIREMENTS

for the development, implementation, evolution, maintenance, technical assistance, support and operation of the

Electronic Voting System of the European Parliament

TABLE OF CONTENTS

1. BACKGROUND AND GENERAL INFORMATION

1.1. STAKEHOLDERS

The Client and Beneficiary of the Contract is the European Parliament (EP).

The owner of the Electronic Voting System (EVS) is the European Parliament. The role of the owner of the system reflects the administrative aspects related to all the competences/powers held by the European Parliament necessary for the ongoing administration and development of the system.

As the owner of the EP's EVS, the European Parliament shall be able to assign to its employees roles and access rights for the user interface and data depending on their job duties.

The Contractor is the successful tenderer, who will sign a Framework Contract for potential future hardware installation and software development dedicated to the electronic vote system as well as maintenance, technical assistance, support and operation, described in this Technical Requirements document.

1.2. ABOUT THE FUNCTIONING OF THE EUROPEAN PARLIAMENT

The European Parliament is established on three main sites:

- Strasbourg, where the Parliament's plenary sessions are held (12 sessions per year, each lasting 4 days),
- Brussels, where the meetings of parliamentary committees and the work of the political groups chiefly take place, where MEP offices, political groups secretariats and some of the departments of the Secretariat-General are located, and where some 2-day plenary sessions of the Parliament are held (the number per year of such "mini" sessions has varied from 3 to 10 in the past 4 years, but their duration is always 2 days per mini-session)
- Luxembourg, where the remaining departments of the Secretariat-General are located.

In these three cities, the European Parliament occupies several buildings consisting of offices and meeting rooms.

The European Parliament also has Information Offices in the various countries of the European Union.

The European Parliament's programme of work is available on its web site at the following address: http://www.europarl.europa.eu.

1.3. ACRONYMS USED IN THE TECHNICAL REQUIREMENTS

Please refer to the document "Glossary of Abbreviations and Acronyms".

1.4. CURRENT SITUATION

Currently the EP uses an EVS designed, developed, implemented, maintained and operated by EUREL Informatica S.R.L., which customised the system for the EP internal procedures.

There are currently 25 meeting rooms equipped with electronic voting material, as well as the hemicycles in Brussels and Strasbourg. In total, there are over 6600 seats equipped with a voting terminal.

The EVS comprises EUREL voting terminals as well as dedicated computers for managing the vote, the speaking time, the voting cards, the vote database and the overall management of the system and equipped rooms.

The electronic is decoupled from the conference systems, which are managed by a separate contract and a different Directorate-General in the EP.

1.5. EQUIPPED ROOMS AND OBSOLESCENCE

Equipped rooms in Strasbourg:

Building	Room	Voting Places	Wall displays	Interpret Booth	Installation Date	Expected Replacement year
LOW	**Strasbourg Hemicycle**	865	2	27	01/08/2011	2023
	N 1.3	160	2	20	01/08/2008	2021
	N 1.4	267	2	24	01/10/2009	2022
	S 1.4	319	2	24	01/10/2009	2022
	S 2.1	0	2*	0	2/10/2015	2025
SDM	S1	100	1	11	01/07/2014	2024
WIC	100	204	1	19	01/07/2014	2024
	200	205	1	15	01/07/2014	2024

Equipped rooms in Brussels:

Building	Room	Voting Places	Wall displays	Interpret booth	Installation Date	Expected Replacement year
PHS	**Brussels Hemicycle**	869	2	22(+5)	01/08/2011	2023
	1A002	286	2	12	01/07/2014	2024
	3C050	350	2	12	01/07/2014	2024
	4B001	132	2	12	01/08/2008	2021
	5B001	139	2	12	01/08/2008	2021
	6B001	106	0	14	01/10/2009	2022
ASP	1E-2	120	1	12	01/10/2009	2022
	1G-2	121	1	12	01/08/2008	2021
	1G-3	160	2	12	01/07/2014	2024
	3E-2	161	1	12	01/08/2008	2021
	3G-2	115	1	12	01/08/2008	2021
	3G-3	160	2	12	01/07/2014	2024
	5E-2	120	1	12	01/10/2009	2022
	5G-2	107	1	12	01/10/2009	2022
	5G-3	165	0	22	01/10/2009	2022
JAN	2Q2	422	2	12	01/08/2015	2025
	4Q2	420	2	12	01/08/2015	2025
	4Q1	220	2	12	01/08/2015	2025
	6Q2	222	3	27	01/08/2015	2025
	6Q1	83	3	26	01/08/2015	2025

The tables above list all rooms currently equipped for electronic vote, including the Hemicycles in Strasbourg and Brussels. They show the installation (or eventual renovation) date of the electronic vote equipment.

* The meeting room S 2.1 has a simplified installation for the speaking time, comprising command console, central unit and video switch to automatically commute the source from the speaking time to ELVIIS.

1.6. MANDATORY SITE VISITS

In order to provide the tenderer with all the information it needs to be able to submit a tender, two mandatory site visits have been organised (one in Brussels and one in Strasbourg). The method of organisation of these inspections are defined in the conditions for submitting a tender.

On completion of these visits, the tenderer will have full knowledge of the premises and of their constraints and specific features (locations, rooms, cable runs, etc.). This will enable him to include in his tender all the information needed for the supply, installation, commissioning, operation and maintenance of the solution he proposes.

The tenderer shall describe and justify in his tender the choices and options he has retained, so that the European Parliament can have the full benefit of his expertise and experience in the matter.

2. SCOPE AND OBJECTIVES

EP – (the Client) aims to sign a Framework Contract in order to be able to manage the obsolescence of the electronic vote system, i.e. replacing installed vote equipment, and also to develop and update / upgrade the existing software dedicated to the electronic vote.

The EP wishes also to evaluate the tenderer's capacity to innovate and its vision regarding the future of the EVS.

The EP hereby sets requirements for the Contractor to design, develop, deliver, install and provide maintenance to a fully completed and operational EVS – a hardware / software solution, as described below, that would allow the Client to use, collect, store, manage and interpret data related to the voting process inside the EP.

The EP shall be able to count on a safe, versatile, efficient and technologically advanced platform. The new EVS shall guarantee:

1. Certainty of voting results,
2. Speed execution,
3. Identification of the voters via MEPs' voting cards and / or other identification methods (including advanced biometric methods),
4. Immediate printouts together with detailed results reports,
5. Analytics / statistics of the data related to results,
6. Historical archive of votes for each legislature,
7. Access to votes via numerous search keys (Member, session, date, topic, etc.),
8. High customisation level of the types of votes to meet the requirements requested.

The expected EVS will be based on wired technology. A wireless solution can be proposed in the framework of an innovative proposal, explained later on in this document.

The objectives of the tender are the **development, implementation, evolution, maintenance, technical assistance, support and operation of the Electronic Voting System (EVS) of the European Parliament (EP).**

More specifically:

1. design and development of a new electronic voting system based on EP needs, taking into account the latest technological developments;
2. replacement of the old infrastructure with new generation equipment;
3. ensure the interoperability of the new and the old types of equipment coexisting during the transition installation period;
4. operation of the system and users support;
5. maintenance and technical assistance;
6. receive evolution proposals from tenderers.

2.1. PURPOSE

Voting is the core activity for the EP during the plenary sessions and the committee meetings.

The EP launches this procurement procedure in order to be able to manage the obsolescence of the electronic voting system, i.e. replacing installed vote equipment, and also to develop and update / upgrade the existing software dedicated to the electronic vote.

The EP's electronic voting system architecture and infrastructure (voting terminals, consoles etc.) were especially designed in response to the EP's specific business needs in order to guarantee security, reliability and availability for all electronic voting procedures and linked operations.

The Obsolescence Plan indicates that the first equipment renewal should be addressed from 2021 in order to ensure that a standard and homogeneous electronic voting service is offered to Members in the Hemicycles as well as in the committee rooms.

2.2.SCOPE

The requirements set for the Contractor include the following categories of products and services:

1. Analysis of the Client current system(s), equipment and documentation.
2. Design and commissioning of an integrated Electronic Voting System, including software components of basic infrastructure (operating systems and databases systems), with the complete documentation which corresponds to the requirements specified in this document.
3. A detailed agenda of these activities in complete adequacy with the EP activities proposed for prior approval of the EP. A specific point of attention will be the interoperability of the coexistent old and new types of equipment during the transition period.
4. Elaboration, preparation and execution of the phase-out/phase-in with the current service provider.
5. Training of the staff of the EP for the assurance of the necessary professional competences for the use of the new system.
6. Configuration of the EVS in order to meet the general and specific requirements of the EP.
7. Implementation of the Electronic Voting System.
8. Establishing procedures and preparation of the necessary own human resources to maintain and operate after commissioning of the new System.
9. Decommissioning of the obsolete current system.

The equipped meeting rooms and hemicycles were not installed at the same time. This means that their expected renewal dates are not the same.

The infrastructure equipment - more specifically servers, KVM switches and related equipment - will be part of the present tender and the tenderer must describe all equipment offered and related price.

However, in certain specific situation, the EP at its own sole discretion can decide that it will procure the equipment though its existing purchasing channels.

For the purpose of developing new software and applications or updating/upgrading existing ones, the successful tenderer is free to transpose existing code or to write his own code from scratch.

3. TRANSITION FROM VECOM3 TO VECOM4

The renewal works shall be done outside the parliament's activities.

The period of summer break (around August) is preferred. However, the amount of rooms that need to be renewed means the works are to be scheduled as soon as the contract is signed, taking into account the periods where the rooms are not in use.

The hemicycles shall be renewed during the summer break. Both hemicycles must be renewed simultaneously during the same period.

3.1. RENEWAL OF COMMITTEE ROOMS

A period - based on the previous renewals - of two consecutive or three non-consecutive weeks per room shall be foreseen. The blocking of the rooms is done together with the calendar unit of DG LINC.

A period of 5 - 7 months after the signature of the first specific contract for the renovation of the rooms is estimated (therefore indicative) so that the contractor can make a more in depth analysis of the specific needs and assure all functionalities of the Electronic Voting System (EVS) in VECOM3 will be delivered with VECOM4.

The 5 -7 months should be divided as follows:

- 1 month for gathering information and workshops with the current contractor,
- 1 month for drafting of the requirements documents produced and EP approval,
- 3 - 5 months for development, prototyping, integration, delivery and installation of the hardware and software.

During the workshops with the current contractor, both the technical aspects of the installation and of the services will be covered.

Example:

The FwC is signed late 2021, together with the SC1 for the first round of renewals.

Month	Main activities / milestones
Month 1	• Kick off meeting • Start of workshops with current contractor

Month 2	) Drafting of documentation (VECOM4 contractor)) Approval of documentation received (EP)
Months 3 and 4	) Start of developments) Start prototyping) Validation of prototype at the contractor's premises) The full equipment is shipped to the EP where it is installed in a dedicated test (laboratory) room connected to the EVS development / preproduction servers.
Month 5	) Validation of the EVS in the EP's lab.) Integration and installation of the hardware and software.) Committee room renewal completed by end of the month.) Begin of assistance and support services related to the renewed rooms.

The subsequent renewals will benefit from the knowledge acquired from the first round of renovations and we expect a period of 45-60 calendar days for their completion (depending on the number of rooms -minimum 1 room / maximum 5 rooms - to be renewed per SC).

The renewed committee rooms will be connected to the current vote network (vLANs).

The renewed rooms will also be connected to the current SQL server infrastructure dedicated to the vote.

As soon as the committee rooms are renewed and operative, the incoming contractor takes over their management, running and maintenance.

The new contractor will install a separate remote control unit to supervise the good functioning of its own installed equipment.

3.2. RENEWAL OF THE HEMICYCLES

A period of 5 - 7 months for the transition is foreseen for the hemicycles' renewal, in the same lines of the previous chapter regarding committee rooms' renewal. This period will also foresee:

- one month for gathering the data and workshops with the current contractor,
- one month for drafting of the documentation and EP approval, and
- 3 - 5 months for development, prototyping, integration, delivery and installation of the dedicated software and hardware.

One or more subsystems or applications mentioned in the next chapter 3.3 (see points 1 to 7) will probably need to be upgraded or replaced during the renewal of the hemicycles. It should be discussed in due time.

What applies for committee rooms applies *mutatis mutandis* to hemicycles.

3.3. PHASING IN AND TRANSFER OF KNOWLEDGE

The contractor currently responsible for the maintenance and running of the EVS (VECOM 3) is also in charge of the following subsystems / applications:

1. Software for encoding cards
2. GBD Vote database manager
3. EUGI
4. Domain Servers
5. Preproduction servers
6. RCV in Committees servers (EP and vote networks)
7. DB Servers, including main database, database for statistics, DB for remote management

As soon as the Hemicycles are renewed and operative, the incoming contractor takes over the management, running and maintenance of the above mentioned subsystems / applications, as well as the responsibility to:

1. Encode the voting cards
2. Manage and maintain the EVS database
3. Update the EVS database from CODICT

Some tasks may overlap between the incoming and outgoing contractor, and some other must be performed equally by both contractors (e.g. setup the equipment for a meeting, update local database from DB server). The incoming contractor shall guarantee a smooth transition, cooperation and coexistence with the outgoing contractor as well as synchronising the common and interdependent tasks.

4. PHASE-OUT AT THE END OF THE CONTRACT

The *next contractor* is the contractor to whom a new contract is awarded after the end of the VECOM 4 contract.

The *Phase-out*: is the period that precedes the renewal - by the *next contractor* - of an equipped meeting room (or hemicycle) that is under responsibility of the VECOM 4 contractor.

Example: The VECOM 4 contractor renews the rooms PHS 4B001 and PHS 5B001. A number of years later, the rooms become again obsolete and the new contractor will be in charge of their renewal and their subsequent maintenance and operations services.

The VECOM 4 contractor shall provide full support to the handover of its responsibilities to the *next contractor*. Any hiding of information or late transfer of information will be considered as a failure to comply with the contract.

The maintenance contract is linked to the contractor responsible for the EVS installation in each room. The VECOM 4 contractor will probably coexist with the next contractor in an analogous manner to the phasing in period. The requirements mentioned in Chapter 3.3, last paragraph, apply *mutatis mutandis*.

4.1. RESPONSIBILITIES DURING TRANSITION

The objective of the *Phase-out* period is:

To organize the migration from the VECOM 4 contractor to the next contractor, to give the staff of the next contractor the opportunity to familiarize themselves with the services and shared / remaining infrastructure, the various contact persons and the different procedures;

To ensure the proper transfer of all necessary elements and business continuity.

During the *Phase-out* period the VECOM 4 contractor remains entirely responsible for the operations.

The responsibility for the operations is handed over to the next contractor on the day the related meeting rooms equipment are decommissioned.

By analogy with the Chapter 3.3, when the next contractor renews the hemicycles it will also be responsible for the voting infrastructure (DB servers, DB Manager, EUGI etc.).

A Phase out period will be necessary for the VECOM4 to provide workshops to the next contractor and transfer the related and necessary knowledge.

Another period, closer to the date where the actual renovation will be finished should be taken into account for the transfer of knowledge of the specific service-related tasks.

4.2. DURATION

The *Phase-out* period will vary depending on the specific conditions of each room or group of meeting rooms to be renewed.

As soon as a renovation project starts, there should be workshops with the next contractor in the beginning of each room's renovation project - so that they can gather all technical information necessary for the new installation.

Another period, closer to the date where the actual renovation will be finished should be taken into account for the transfer of knowledge of the specific service-related tasks.

The phase out periods will be valid for each of the meeting rooms that will be decommissioned from the VECOM 4 contractor.

5. SYSTEM CHARACTERISTICS

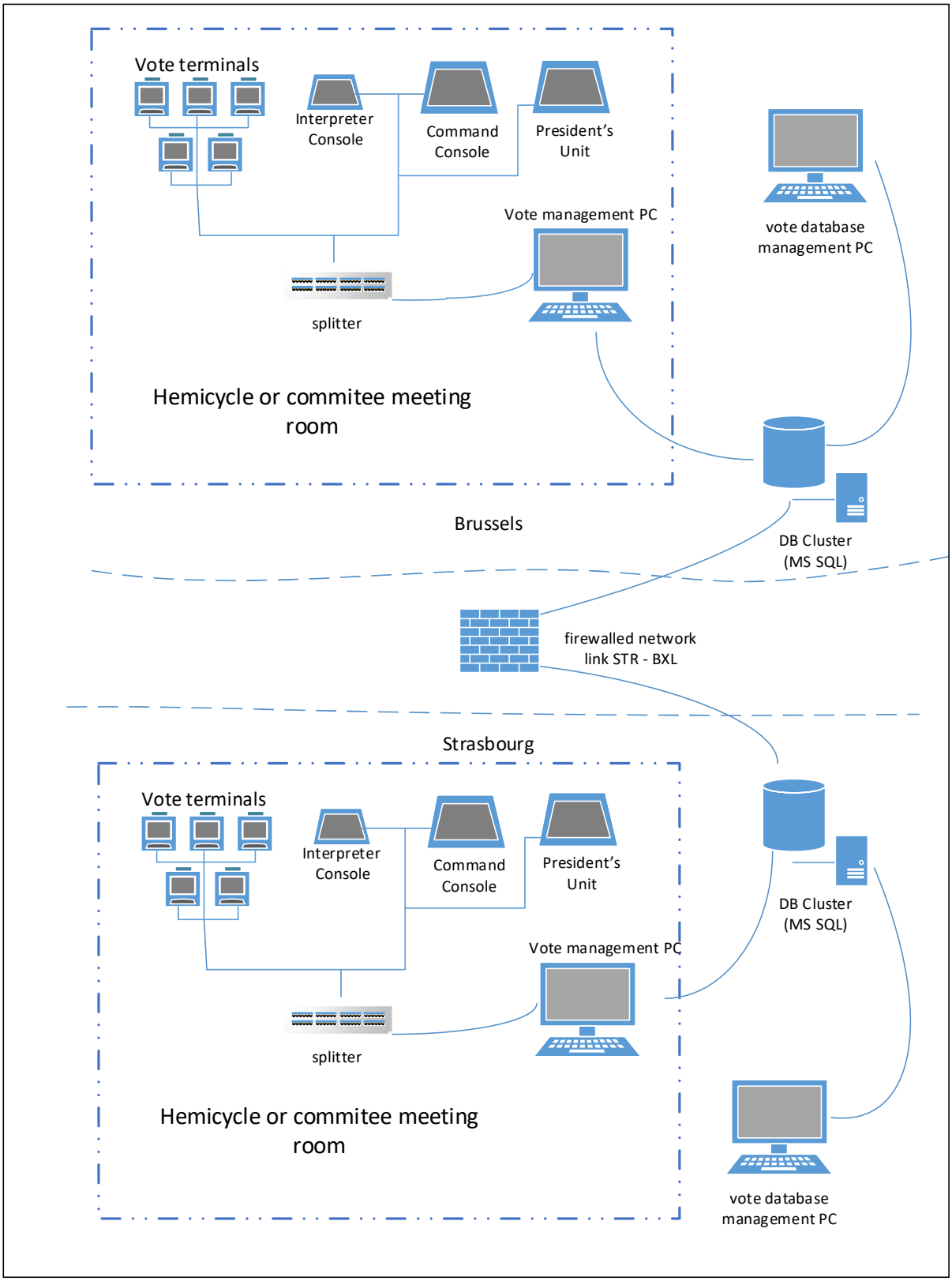
The main aim of this chapter is to describe the EVS installed in the European Parliament in Brussels and Strasbourg, which will serve as baseline.

It also includes some additional requirements for the related future installations.

Each numbered requirement is labelled as ***RQ###***.

The solution proposed by the tenderer shall have at its minimum the same features of the current system.

The following diagram describes the main EVS components currently installed in the EP:



Each equipped room contains a basic set of equipment: voting terminals, president's unit, command console, interpreter console and management PC.

The command console enable the operator to execute the main tasks of the EVS:

- Open, close and display results of a vote;
- Start, stop and reset the speaking time counter (during the debates).

In the hemicycles, the command console allows to manage two additional features, namely Catch the Eye and Blue Card, both related to registering MEP requests to take the floor.

The Management PCs are located in the technical booths and allow to setup the system according to the meeting scheduled, and can perform the tasks described above for the command console.

A voting session in the EP's hemicycle generally takes place at a scheduled time. A voting session includes more than one report or resolution, and each of them can contain items to be voted such as amendments, resolutions, opinions or separate parts of the original text.

The vote can also be done by a simple show of hands; in this case the EVS is not used.

The EVS charges the voting lists from an external service and gets ready for the vote. The opening/closing/display of results is done by the staff in the voting booth, following the instructions from the sitting's chairman. The results are registered locally and in the vote's central database.

MEPs must have their personal voting card inserted in the terminal to take part in an electronic vote.

After the staff has checked the technical correctness of the results of the votes, the EVS sends the vote results to another EP service to be processed and included in the sitting's minutes.

5.1. VOTING TERMINALS

Voting terminals are the devices needed to handle voting and provide information to the MEPs

Identifier	Description
RQ001	For optimum desk ergonomics, the terminal physically occupies the space allocated at the top of the MEP's desk.
RQ002	The voting terminal is attached to the desk, in a manner that allows easy removal and reinstallation without damage to the furniture.
RQ003	The terminal can be easily replaced while the system is in operation, i.e. disconnection (and/or failure) of a single terminal has no effect on how the system and the other terminals operate.
RQ004	The terminals are connected to the network via an ID interface for addressing purpose. The terminal itself does not contain an ID, which facilitates its replacement if necessary. An alternative solution can be offered as long as it offers the possibility of quickly replacing a terminal and allows easy identification of the terminal and its location.
RQ005	The terminals have a permanent self-monitoring system (watchdog). Any non-functioning terminal is indicated on the management unit.
RQ006	It shall be possible to easily reprogram the terminal’s software (or firmware).
RQ007	All terminals shall be able to operate simultaneously.
RQ008	The hemicycle’s terminals have currently extra functionalities with respect to the ones installed in the committee meetings, as explained below. (election mode, speakers list, catch-the-eye, blue card ...) It is however necessary to have uniformity in the terminals, i.e. that the terminals for the plenary and committees have the same capabilities. See also 15.3

Identifier	Description
	Expanded Voting Capacity. No further distinction between "Hemicycle Terminal" and "Committee Terminal" will be done. All terminals shall be of the same model and have the same features.

The terminals are equipped as indicated below:

Identifier	Description
RQ009	Chip card reader allowing - SLE 4442/5542 memory cards - 'JAVACARD' intelligent cards (including SMARTMX2-P60 and Cyberflex 32K/64k)
RQ010	It shall be easy to adapt the terminal for users with reduced mobility (e.g. by means of an extension cable and a remote control box)
RQ011	For visually impaired users: - Identification of the buttons (braille or alternative) - Audio feedback on how they voted
RQ012	Visual indication of the terminal status (no card, invalid card inserted, ready for voting);
RQ013	Three concealed voting buttons, identified by means of logos
RQ014	'Vote cast' indicator (4 coloured LED lights):

Symbol	Vote	Position
+	For	Left;
O	Abstention	Centre;
-	Against	Right;

Vote	Colour
For	Green
Against	Red
Abstention	White
Secret ballot	Blue

Identifier	Description
RQ015	A colour touch screen (display) providing the following information:
RQ016	) Stages of the vote: open, closed;
RQ017	) Invalid or incorrectly inserted card, or two cards of the same MEP inserted in the room (double badge);
RQ018	) Identification of Member (surname, political group, language, code of scanned card or PERS ID). If a card is not inserted the information displayed comes from the server, otherwise read from the card itself;
RQ019	) The current date and meeting (e.g. committee name);
RQ020	) List of speakers or announcements are displayed between votes and outside voting sessions (in the plenary hemicycles);
RQ021	) Speaking time counter;
RQ022	) Error notification.
RQ023	) Pictograms are used as much as possible for the information displayed.
RQ024	The display size shall be of at least 5,5 inches
RQ025	Touch screen technology
RQ026	The vote terminal screens may display images coming from e.g. a slideshow presentation or jpg file broadcast from the vote booth.
RQ027	Button (or touch screen) to allow registering for the Catch the eye procedure (in the hemicycle)
RQ028	Button (or touch screen) to allow registering for the Blue Card procedure (in the hemicycle)

Identifier	Description
RQ029	Ability to choose from a list of candidates in Election mode (in the hemicycle)

5.2. MULTIFUNCTION CONSOLES

In addition to the voting terminal, multifunction consoles are installed at the presidency desks.

The hemicycle consoles can be configured as:

1) President Monitor,
2) speaking time counter and
3) command console.

The committee meeting consoles can be configured as:

1) President Monitor and
2) speaking time + vote command console.

Identifier	Description
RQ030	The hemicycle should have 5 consoles installed
RQ031	The console is a touch screen or simplified keyboard-screen.

5.2.1. PRESIDENT'S CONSOLE/MONITOR

The President's console / monitor also have a specific facility for providing the status of the EVS. The following Information is provided:

Identifier	Description
RQ032	Number of cards present in the room, in real time;

Identifier	Description
RQ033	Dynamic indication of how the vote is proceeding (number of MEPs voting, in real time);
RQ034	Stages of the vote: - idle and ready to start; - vote open; - vote closed; - display of results.
RQ035	The type of vote (simple, RCV, secret);
RQ036	Indication, in real time, if the limit of voters per political group has exceeded (management of parliamentary committee's numeric consistency/ political group membership);
RQ037	The speaking time counter;
RQ038	Results of the vote: - Total number of voters; - Number of votes "for"; - Number votes "against"; - Number of abstentions.
RQ039	The results are displayed on the President's control console immediately after a vote is declared closed. Results are not displayed in the room screens - if displayed at all - until they have been announced by the President.
RQ040	The information displayed on screen is a combination of numeric and pictogram form.
RQ041	The list of current and upcoming speakers coming from CARTON (EUGI)
RQ042	The list of MEPs currently registered for the Catch the Eye procedure or Blue Card.

5.2.2. COMMAND CONSOLE ON THE ROSTRUM

During plenary voting sessions, all operations (input the subject of a vote, opening /closing of votes, and displaying the results) are performed by system operators in a control booth.

During committee or political group meetings the operations are controlled from a unit on the rostrum (by an assistant or by the chairman himself), also called Command Console:

Identifier	Description
RQ043	It operates as a remote system operation unit.
RQ044	If at the opening of the vote there is a committee consistency issue (i.e. there are more MEPs from a political group than allowed), it will be displayed immediately on the console.

This unit allows the following operations to be controlled from the presidency rostrum:

Identifier	Description
RQ045	Select a voting session by choosing a committee/joint committee/political group;
RQ046	Select a voting session date and time;
RQ047	Display the table showing the membership of the (joint) committee by political group and allow the table to be modified temporarily (for the current voting session).

When the system is setup and ready for the vote, the screen displays:

Identifier	Description
RQ048	The number of cards inserted into the voting terminals;
RQ049	Signalling errors in the room (duplicate badges, etc.)

At the **vote stage,** it allows the following:

Identifier	Description
RQ050	The subject of a vote to be input and processed, or automatic increment;
RQ051	In the future, integration with the voting lists from the committees might be foreseen.
RQ052	A vote to be opened and the type of vote to be selected: - Simple (check) - Roll-call - Secret vote (secret ballot)
RQ053	A vote to be closed;
RQ054	The results to be displayed in the room;
RQ055	The system to be reset.

5.2.3. SPEAKING TIME

The following operations shall be present:

Identifier	Description
RQ056	Pre-programming the time allotted to speakers, in minutes and seconds;
RQ057	Automatic pre-programming of the time allotted to speakers, if the information is available in CARTON (see 5.13 *Interfacing With Other Services*);
RQ058	Timing (counting up or down, in minutes/seconds) a speaker's speaking time. Create separate modes for counting down or up for better user experience;
RQ059	Activating, suspending, resuming and re-setting the timing function;
RQ060	Showing this information on screens (console command, terminals, room screens);

Identifier	Description
RQ061	Showing a pictogram (a red blinking asterisk "*") to indicate that a speaker's speaking time has been exceeded;
RQ062	When configured to count down, the asterisk will automatically appear and the numbers will also change colour to red, when the counter reaches zero;
RQ063	Enable or disable the modules for Catch the eye or Blue card;
RQ064	Display the list of current and upcoming speakers coming from CARTON (EUGI);
RQ065	Display the list of MEPs currently registered for the Catch the Eye procedure and/or Blue Card, including the possibility to navigate, select and remove.

5.3. DISPLAY FOR INTERPRETERS

Display units are installed in the interpreting booths (two per booth). Each of these non-interactive units allows interpreters to read the following information:

Identifier	Description
RQ066	Speaking time;
RQ067	vote open and closed; and type of vote (simple, RCV, secret);
RQ068	Results of the vote (total votes cast, votes for, against and abstentions);
RQ069	The list of speakers / announcements (in the hemicycles only).

Other requirements:

Identifier	Description
RQ070	The unit shall be a coloured display.
RQ071	The hemicycle console's display size shall be of at least 4.3 inches (diagonal).
RQ072	The results of the vote are displayed when the vote is closed, at the same time as on the **president's terminal** on the rostrum.
RQ073	The interpreter console shall also function in a "staff" mode. In this mode the vote results are shown at the same time as they are displayed on the **vote terminals** (in contrast to the previous requirement above).
RQ074	The information displayed shall be visible both in the darkness and under full light.
RQ075	The interpreter display shall provide the information in the same format as the one displayed in the Hemicycle big LED screens, i.e. coming from ELVIIS totems.
RQ076	The terminal can be installed (at an MEP seat) for the special cases that a personal interpreter is required.

5.4. DISPLAY PANELS

One or two display panels of different size and technologies are installed in the meeting rooms depending on the room possibilities and on visibility.

The following information is displayed:

Identifier	Description
RQ077	Subject of the vote
RQ078	Total number voting (3 characters) + graphic symbol
RQ079	Number voting for (3 characters) + graphic symbol

Identifier	Description
RQ080	Number voting against (3 characters) + graphic symbol
RQ081	Number abstaining (3 characters) + graphic symbol
RQ082	Graphic representation of the stages of the vote (open, closed). It also shows the type of current vote (simple, roll-call, secret);
RQ083	Speaking time (4 digits) + “time exceeded” symbol.
RQ084	The future installations in the committee rooms shall also display a seat map of the room with the color-coded vote results in case of a RCV, as implemented for the hemicycle.

Other requirements:

Identifier	Description
RQ085	The video format of the output is currently either VGA, DVI or HDMI, depending on the room it is installed.
RQ086	An HDMI (digital) output format is desirable for the future installations, but there should be flexibility enough to adapt to each room’s characteristics.
RQ087	There should be also the possibility to provide the video outputs of the EVS (in committee rooms) so that it is processed by an external video processor. The Conference Technicians service is upgrading their installations in the committee rooms and their large screens could show the info coming from the electronic EVS, as it is already done in the JAN building rooms.

In the hemicycles, the same information above is generated via a Video Gateway and sent to the SMIAP to be displayed on the big screens. The video format is HDMI, Full HD and 16:9 ratio.

Identifier	Description
RQ088	The Video Gateway is a separate equipment (PC) that receives the data from the EVS and generates the vote information: - EP Logo - Name of report and item put to the vote - Simple vote open / close - Roll-call vote open / close - Secret vote open / close - Simple / secret vote results in figures only - Vote results figures plus a coloured seat map representing vote cast per MEP - Speakers' list and announcements - Elections' results

In Strasbourg, the pressrooms receive a video signal containing the results of the vote in real time. The vote results are broadcast to the pressroom at the same time as they are shown in the hemicycle.

5.5. SYSTEM OPERATION AND MANAGEMENT UNITS (PCS)

Identifier	Description
RQ089	All the management units (pcs) are Professional machines and have RAID 1 HDUs, USB connectors, network devices (connectors, communication cards) and all the peripherals making up ergonomic, comfortable workstations.
RQ090	Full installation, software configuration, parameterisation and the associated licences form part of the supply operation.
RQ091	For consistency, the keyboards are QWERTY (English).

Identifier	Description
RQ092	The pcs will all run, whenever possible, under the standard OS used at the EP.
RQ093	A remote management of operations in the meeting rooms is present. It includes: - powering up the equipment and remote control - monitoring of the management pcs from the electronic voting central control booth (Chamber) and/or from another room. - visual alert on any potential issues in the room (terminal malfunction etc.)
RQ094	The EP's chosen anti-virus software shall be installed on ALL pcs. If these PC are connected to the EP network, the automatic update and periodical scanning must be activated.
RQ095	A high-speed, silent network laser printer is connected to each meeting room's management PC for printing the voting records. The printer will be supplied by the EP.

5.6. VOTING SOFTWARE

The management units, both in the hemicycle and in the committee rooms, provide the following functionalities:

Identifier	Description
RQ096	Allow manual or automatic input of the subject of a vote and changes to be made to this during the vote
RQ097	Allow the type of vote to be selected (ordinary, roll-call, secret ballot) and changes to be made to this during the vote;
RQ098	Allow on-line checking of the state of a terminal
RQ099	Allow MEPs to change their choice of vote until the President declares a vote closed.

Identifier	Description
RQ100	The EVS records only the last choice made before the vote is closed.
RQ101	Real-time registration and processing of votes;
RQ102	Display of results and / or information manually inserted or imported from external sources via gateways (part of this contract) on: - The president console - The voting terminals - The interpreters display terminals - The room TV screens (in committee rooms) - The large LED wall screens through video gateways (part of this contract) and a video management system (SMIAP - managed through another contract);
RQ103	Recording the voting results, including:
RQ104	- Serial number of the vote
RQ105	- Date and time of the vote (system data)
RQ106	- Type of vote (simple, roll-call, secret ballot);
RQ107	- Subject of the vote
RQ108	- Result of the vote in figures
RQ109	- The list of those voting, indicating the type of vote cast in the case of a roll-call vote
RQ110	- The state of each terminal (card inserted, vote cast, terminal or card error)
RQ111	- Chairman
RQ112	- meeting / committee code
RQ113	- external vote ID (also known as ELVIS-ID)
RQ114	Voting results are printed automatically immediately after each vote.

Identifier	Description
RQ115	All the information is stored locally and on the database immediately after the vote is closed.
RQ116	Management of speaking time
RQ117	Allow on-line searching for a terminal, voting card, etc., from the system operation unit

The system should allow for immediate detection and logging of the following errors / incidents:

Identifier	Description
RQ118	Terminal firmware error
RQ119	Non responsive terminal / console
RQ120	Double Badge (2 identical voting cards inserted in the room)
RQ121	MEP Political Group Strength inconsistency (more MEPs from a political group voting than the amount allocated per committee)
RQ122	No card inserted
RQ123	Card not fully inserted
RQ124	Card inserted wrong way
RQ125	Card not readable
RQ126	Card incorrectly encoded/invalid
RQ127	Database connection
RQ128	SMIAP connection
RQ129	VideoGateway connection

5.6.1. MANAGEMENT OF MEPS' SPEECHES

The system ensures the possibility for each MEP to register for speeches during the plenary sessions.

The system compiles and display on the screen of session's Chairman lists of MEPs drafted - according to the group and registration time - who have registered to:

Identifier	Description
RQ130	Take the floor
RQ131	Ask questions to the current speaker (Blue card procedure);
RQ132	Register for the Catch the Eye procedure.
RQ133	The System shall allow the Session's Chairman to limit MEPs' registration for interventions.

5.6.2. TYPES OF ELECTRONIC VOTE

The types of vote normally used in the European Parliament are:

Identifier	Description
RQ134	**1) Simple vote (check):** The electronic system is used only to check the result of a vote by show of hands that is very tight or unclear. In this instance, only totals are displayed and published.
RQ135	**2) Roll-call vote (RCV):** Details identifying MEPs and the details of their vote are registered in the minutes of the meeting.
RQ136	**3) Secret vote (secret ballot):** The total number of votes cast is published, as is the list of MEPs voting, but the vote cast at each terminal (in favour, against etc.) is **by no means** identifiable.

Identifier	Description
RQ137	**4) Election vote:** MEPs can choose one or more candidates from a list in order to establish a ranking. It is a secret Ballot as only the list of MEPs voting is registered, as well as the total of votes per candidate. The system complies with the related internal rules such as majority and minimal threshold. See rules 15 to 18 here: https://www.europarl.europa.eu/doceo/document/RULES-8-2019-03-25-TOC_EN.html
RQ138	The system shall allow, also for simple, RCV and secret votes, the internal rules regarding absolute and qualified majority
RQ139	Election mode is now only available in Hemicycles. The future installation in committees should allow for election mode also on committee meeting rooms

5.6.3. VOTE IN PARLIAMENTARY COMMITTEES

During committee and political groups meeting votes, a group consistency check is carried out to verify the allocated number of Members voting per political group.

Identifier	Description
RQ140	The MEPs' and group consistency databases are updated on the central voting server and automatically transferred to the meeting room control units.
RQ141	The RoP also foresees Joint Committee Meetings. In this case, the total number of voters (and voters per political group) is an aggregate of the two (or more) committees' composition.
RQ142	The voting results are sent electronically to the committee's secretariat.
RQ143	The hemicycle EVS shall be able to work in committee meeting mode.

5.6.4. OTHER VOTING MODES

Identifier	Description
RQ144	Dummy cards (EUROSCOLA): The system can be configured to operate in EUROSCOLA mode, where non-electronic voting cards (no chip needed) must be inserted into the terminal to enable it to vote. All four types of vote are allowed in this mode. An alternate database is used for this mode, allowing the name "EUROSCOLA" to display on the terminals, followed by the seat number.
RQ145	No cards: The system can also be used without voting cards. All terminals in the room are enabled to the vote. Similarly, all four types of vote are allowed in this setup.
RQ146	ACP (OR VOTE BY SEPARATE HOUSES): Other external political groups can also vote together with the MEPs during special meetings, e.g. ACP-EU Joint Parliamentary Assembly EURONEST. They can make use of the electronic vote, and the vote system is adjusted accordingly to accommodate the information regarding voters from external bodies. The system allows a vote to be open and at the same time to allow: - only EP members to vote (EP voting cards active only); - only non-EP members to vote; - all terminals with a valid voting card to vote.
RQ147	The ACP mode above is only foreseen for the Hemicycle. It is desirable to allow it for the committee rooms as well.

5.7. ADMINISTRATION OF THE SYSTEM

Identifier	Description
RQ148	The administration of the EVS shall be done by the Contractor after informing the EP. For this purpose he (the Contractor) will be also named System Administrator.
RQ149	System administrator and users shall log on into the system by using a biometric identification method.
RQ150	EP Electronic Vote staff and System Administrators will have full access to all the functionalities of the system, files, databases and software applications of the EVS.
RQ151	The System Administrator will have the following responsibilities: - ensure the normal operation of the IT system guaranteeing accessibility, security and integrity of data; - monitor the activity of system users; - at the request of decision makers from the EP, administrators make changes to the System (within the limits of the technical parameters of the information solution); - technical administration of the infrastructure of the new EVS of the EP
RQ152	The System Administrator will be able to monitor all actions that occur in the System. For this purpose, the System will have its own logging mechanism.

5.8. MANAGEMENT OF VOTING CARDS

Identifier	Description
RQ153	The EVS shall allow the encoding and verification of the voting cards with the minimal information regarding the MEP that will allow him to vote and to identify his terminal: name, language, political group, PERSID, current legislature etc.
RQ154	The contractor shall provide the necessary voting cards of type 4442/5542 , 'JAVACARD' intelligent cards (including SMARTMX2-P60 and Cyberflex 32K/64k) or compatible. It should be included in the tenderer's financial proposal. For each legislature i.e. each 5-year term the EP consumes approximately 5.000 voting cards.

5.9. MANAGEMENT OF VOTING LISTS AND RESULTS

Identifier	Description
RQ155	For plenary votes, The EVS shall allow the management of the voting lists database to allow for manual input , import and editing of imported voting lists
RQ156	For committee votes, The EVS shall allow the management of the voting lists database to allow for manual input , import and editing of imported voting lists
RQ157	The EVS shall allow the management of recorded votes, especially to correct any eventual operational errors or exceptions e.g. votes taken more than once, double badge, votes recorded on a wrong list item.

5.10. MANAGEMENT OF MEP INFO

Identifier	Description
RQ158	The EVS shall allow the management of the imported MEP info in the DBMS to allow for manual input, import and editing etc.
RQ159	It shall allow as well the creation and import of non-MEP voters such as ACP or EURONEST members, other groups who will use the EP's EVS.

5.11. RESPONSE TIMES

The system is expected to provide the minimum general performance levels indicated below:

Identifier	Description
RQ160	Opening a vote: Less than one second
RQ161	Closing a vote: Less than one second
RQ162	Consolidation of results after a vote is closed: Less than one second
RQ163	Maximum time between completion of a vote and the following vote: Less than three seconds
RQ164	The process of saving of results on the database shall not interfere with the above-mentioned response times.

5.12. DATABASE

The current solution is based on MS-SQL. It comprises two servers in a cluster in Brussels and another two (also clustered) in Strasbourg. **Their data is continuously synchronized between the two sites. It will continue to be the platform for the current and future installations.**

The DBMS, under the vote VLAN, stores the specific information necessary for the electronic vote:

Identifier	Description
RQ165	MEPs information such as name, nationality, political group, main language, seat number, PERS ID, imported regularly from the CODICT database;
RQ166	Parliamentary Committees data, including numeric strength consistency - also imported from CODICT;
RQ167	Voting lists;
RQ168	Voting Results both from the hemicycle and the committee rooms;
RQ169	Errors or exceptions occurred during the vote and identified by the software
RQ170	Messages to be displayed on the terminals.
RQ171	A database for testing purposes containing information for all the terminals installed in the hemicycles, associated with a test set of cards.

Furthermore:

Identifier	Description
RQ172	A dedicated software called GBD (database manager) allows to visualise and edit the data on a business perspective and not via the DBMS vendor manager: - MEPs names, PERSID, political group, seat, etc. - Committees - Political groups - Voting lists - Voting results - messaging (text to be shown on the terminals)
RQ173	The database allows the EVS to create reports / statistics on usage and votes, both for internal use and under

Identifier	Description
	request of related services in the EP. **A separate database** exists for this purpose and contains consolidated data.
RQ174	The system comprises 4 SQL servers, arranged in 2 clusters (one in Brussels and one in Strasbourg) and **continuously synchronized** to guarantee both availability and resilience.
RQ175	A pre-production database system comprising 2 physical servers (one per site) is also in place.

5.13. INTERFACING WITH OTHER SERVICES

The information set out below give tenderers an idea of the importance of the interoperability of the EVS, in terms of integration:

- With the existing electronic vote infrastructure, and
- With the related services managed by different teams in the EP.

Identifier	Description
RQ176	The technology used for the Web Services shall be compliant with the European Parliament DG ITEC standards. (Please refer to the Annex I.O - EP_IT-Environment-and-Development-standards - see also Chapter 11.3.2 *EP Development Standards*).
RQ177	All the interfaces of the applications shall be properly documented (e.g. with the application of model Web Services Description Language – WSDL).
RQ178	All current interfaces, as described in the sub items below, must continue to exist and should be subject to maintenance and upgrades, so that they adapt to changes on the electronic vote system and the interfaced services, changes and evolutions in the working standards or technology.

The main interfaces with the EVS are ACTES, ELVIIS, ALV (via EUGI), SMIAP, DocEP and CODICT.

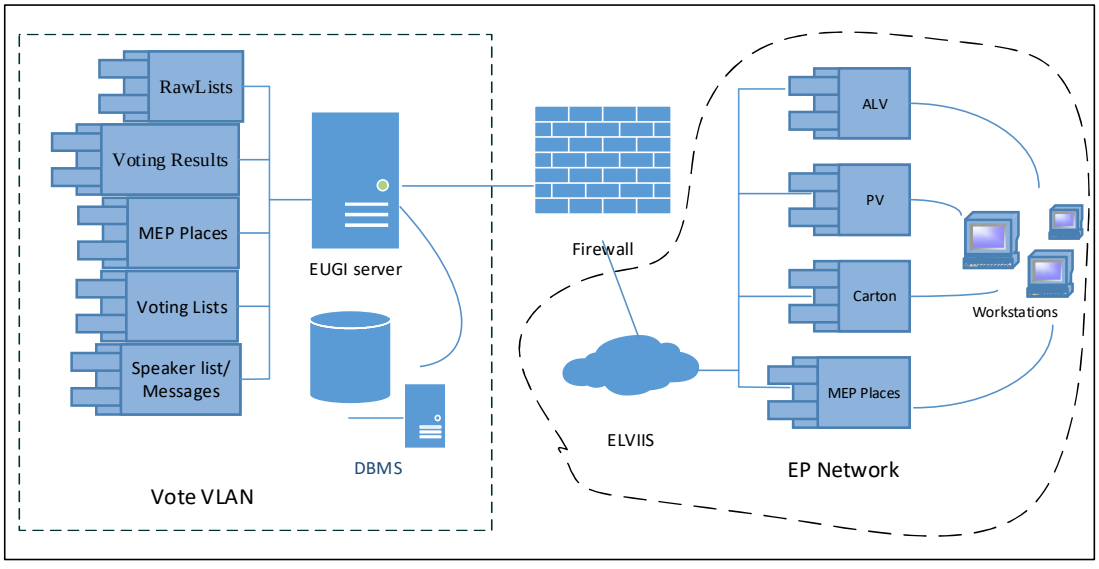
5.13.1. EUGI

EUGI (EU Gateway Interface) is a Linux server that manages the interfacing between the vote and the applications ACTES, ALV and ELVIIS.

The gateway is a java application, which currently runs on Tomcat 8, Java 8. The operating system is CentOS 6.6. The data is transported via JMS and / or Web services.

EUGI is divided in 5 modules:

Service	Description
RawLists	After each voting session, the EVS sends the detailed results (Raw List) of the electronic votes to a third-party application called ACTES
Voting Results	After each vote in a voting session, the EVS sends the simple results of the electronic votes to ACTES
Voting Lists	Voting lists are imported from a third-party application called ALV (Alimentation des Listes de Vote) into the EVS, allowing them to be edited and processed.
MEP Places	After each insertion or removal of a voting card in a terminal, the EVS sends the locations of MEPs cards to ELVIIS in real time.
Speaker list / Messages	This information is received from a third-party application called ELVIIS. This is feature also known as "CARTON".



5.13.2. SMIAP

The SMIAP System comprises the big LED screens installed in the hemicycles. They are managed by a separate contract.

The EVS is connected to the SMIAP at two levels:

a) providing the video signal including
    1. speaking time,
    2. the stage of the vote
    3. the simplified voting results in case of a simple or secret vote
    4. a seat map of the hemicycle with the color-coded vote results in case of a RCV
    5. the list of speakers as backup source.
    6. election results.

b) By sending commands via network to automate the switching between presets depending on the stage of the vote

5.13.3. DocEP/ RCVS IN COMMITTEES

The results of the RCVs stored during a Committee meeting are also sent electronically to the responsible committee's secretariat.

Currently they are transmitted automatically via web services with a Microsoft Word based software called DocEP, used by the committee's secretariats.

It foresees a secure passage between the vote and the EP network (a gateway server) in order not to connect directly to the EP users' workstations.

There are new modules being designed / developed to make the results available also to the political Groups, and it involves integrating meeting metadata to the committee meetings vote results. The data comes from another service called ITER.

5.13.4. CODICT

CODICT (Codes Dictionary) is a database that contains up-to-date information about the MEPs and parliamentary committees.

The transmission of the relevant data to the EVS is done offline. The data is exported to a text file and uploaded to our GBD (see Chapter 5.12 *Database*).

6. MANAGEMENT OF INCIDENTS AND INTERVENTIONS

In the event of a problem (or a breakdown) affecting the equipment and requiring an intervention on any individual item of equipment, the Contractor will carry out corrective action.

The contractor will alert the European Parliament about any newly arising problem affecting the equipment, and which would require preventive maintenance. These actions will be carried out at no additional costs for the European Parliament. The European Parliament will use the following information to identify Problems:

- Mean Time To Repair (MTTR or downtime) - the measure of time when service is not available to the time service becomes available.
- Mean Time Between Failure (MTBF or uptime) - the time when the service is available.
- Mean Time Between System Incidents (MTBSI) - the time between previous and next incident (MTTR + MTBF).

6.1. REGISTRY OF INTERVENTIONS

The contractor shall keep a record of the causes of incidents, specifying at least the type of intervention, a list of faults that have occurred with the product and preventive and corrective intervention and repairs carried out, the date of the last maintenance inspection and/or preventive inspection if applicable, the European Parliament's intervention ticket, an easily understandable breakdown code, and the ticket opening and closing date.

Separate tickets shall be created for incidents and for problems, and they should be able to be linked to each other.

For any intervention, preventive or corrective, support or assistance, the contractor should add an entry to the maintenance registry. The registry shall be available for the responsible staff from the EP. The EP can also provide an internal registry tool. The contractor might be asked to use the provided tool to register the interventions. The information required is as follows:

a) Location of the related intervention;
b) Date and time of the intervention;
c) Eventual malfunction found or reported;
d) Description (and identification) of the hardware affected;
e) Type of intervention performed;
f) Duration;
g) Date and time of the closing of the incident.

The reports extracted from the registry will allow a statistical analysis of the incidents and maintenances and the monitoring of the services provided. They can be used as a basis for periodical meetings between the responsible EP staff and the contractor to evaluate the quality of the service or eventual maintenance to be performed.

6.2. REPORTS AND SYNOPSIS REPORT

Each change carried out by the Contractor as part of the operation, maintenance and support services shall be recorded in an activity report (after each and every intervention) to be drafted by the Contractor.

All services, work and other elements shall be recorded in a quarterly synopsis report to be prepared by the Contractor and submitted to the European Parliament for acceptance.

6.3. SPARE PARTS PACKAGES

In order to guarantee the effectiveness of the maintenance services, including, in particular, the curative work, the Contractor shall provide, on both the European Parliament's sites, a spare parts package for the EVS. These two spare parts packages, included in the tenderer's financial proposal, shall enable the service to be restored in the minimum time.

The parts in these packages shall be considered as replacement parts for defective production parts, available on site for quicker service restoration. Both the cost of the spare parts packages and the cost for using the parts within the scope of this contract is included in the cost of the maintenance.

The Contractor shall guarantee the management and the quality of these packages at all times, including the regular testing and eventual replacement of any missing or defective part. The status of the spare parts packages shall be kept up-to-date by the Contractor, and shall always be available to the European Parliament. All cost related to the spare parts packages shall be borne by the contractor.

The spare parts packages shall be kept in the rooms provided for this purpose on each of the European Parliament's two sites, in Brussels and in Strasbourg. It is allowed to foresee usage of Brussels spares for Strasbourg interventions, and vice-versa.

7. CHANGE MANAGEMENT

7.1. CHANGE OF MODEL

Supplies shall be available for not less than 24 months.

With regard to supplies, the period of availability of accessories and/or options and/or extensions provided for in the contract for each successive model shall not be less than two years with effect from the date on which the accessories and/or options and/or extensions are officially introduced in the European Parliament.

In the event of a change of model, the Contractor shall propose, for the entire duration of the contract, the supply of equivalent or superior equipment than the preceding model, having regard to the initial performance criteria (technology, standards, etc.) set out in the tender documents. The product shall not have a higher price than that of the model it replaces. The final decision as to whether or not to accept any such change of manufacturer shall be taken by the European Parliament.

Some criteria which were compulsory when the tenders were assessed may no longer be compulsory at the time of a change of model in accordance with technological developments; only the European Parliament will be authorised to decide that such criteria are no longer compulsory.

Any change must be requested (request to be sent before the equipment is received) and formalised using the European Parliament's 'Change of model' form.

This document includes the following information, in particular:

a) the reasons for the change and the key dates;
b) information concerning the validation of the product by the European Parliament
c) the new price and/or terms and conditions;

The Contractor must ensure continued delivery of the previous product until it is actually replaced.

7.2. CHANGE MANAGEMENT - PRICE CHANGE

In the event of a change of price, a formal request shall be sent before the planned application of the change. Any requested change shall be formalised using the European Parliament's 'Price change' document, specifying in particular |the reasons for the change and the key dates.

A new price list, cancelling and to replacing the previous one, shall always be annexed.

8. HUMAN RESOURCES - ORGANISATION AND COMPETENCE

The following profiles are applicable:

Profile	Minimum Requirements
Project Manager (PM)	
Qualifications, skills and professional experience	⁃ University graduate in IT&C or electronics fields; ⁃ Knowledge regarding a methodology for IT services management, and the necessary and sufficient skills for creating the IT flows and processes; ⁃ Ability to speak, write and read English language fluently; ⁃ At least 10 years of overall professional experience in the field of designing EVS for political bodies / legislative assemblies. ⁃ At least 5 years of experience in the management of IT&C projects; ⁃ Professional experience as Project Manager in at least one equivalent project where the project's value was at least equal to the value of the proposed contract.
Senior Analyst (SAN)	
Qualifications, skills and professional experience	⁃ University graduate in IT&C or electronics fields; ⁃ At least 5 years of professional experience in the field of hardware design for EVS for political bodies / legislative assemblies; ⁃ At least 5 years of overall professional experience in the field of microprocessor firmware programming and application software engineering; ⁃ Professional experience as Senior Analyst in at least one equivalent project where the project's value was at least equal to the value of the proposed contract.
Senior developer (SD)	
Qualifications, skills and professional experience	⁃ At least 5 years of professional experience in the field of software development for EVS for political bodies / legislative assemblies; ⁃ Professional experience as Senior Developer in at least one equivalent project where the project's value was at least equal to the value of the proposed contract.

Profile	Minimum Requirements
Junior Developer	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of writing of source codes of specific programs and applications for EVS for political bodies / legislative assemblies.
Graphical Interface Designer (GID)	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of GUI designing preferably for EVS for political bodies / legislative assemblies.
Senior Engineer (SE)	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of technical assistance for EVS for political bodies / legislative assemblies;) At least 5 years of professional experience in the field of supervising the hardware and software perfective maintenance assistance for EVS for political bodies / legislative assemblies.
Junior Engineer (JE)	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of technical / operational assistance service during parliamentary sessions;) At least 5 years of professional experience in the field of corrective maintenance assistance for EVS for political bodies / legislative assemblies;) In-depth knowledge of the various phases of installation of EVS in political assemblies' rooms / halls.
Senior Field Technician (ST)	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of installation of EVS in political assemblies' rooms / halls;) In-depth knowledge of the issues related to structured cabling and installation of electronic devices in places of particular prestige in which the finishing of the interventions shall be of the highest quality;) Operating according to European safety standards.

Profile	Minimum Requirements
Field Technician (FT)	
Qualifications, skills and professional experience	) At least 5 years of professional experience in the field of electrical cabling, installation and rack mounting, installation of devices;) Particular preparation to operate in institutional settings (parliamentary rooms, committee rooms, meeting rooms, etc.) which have important aesthetic and prestige relevance;) Operating according to European safety standards.

The above mentioned minimum requirements will be proved by CVs.

The tenderer shall send the CVs of the staff or experts to be used during the implementation of the contract; each CV shall indicate to which profile it corresponds. The CVs shall be presented in Europass format:

https://europass.cedefop.europa.eu/en/documents/curriculum-vitae

Any changes on the proposed staffing plan should be communicated by the contractor and approved by the contracting authority.

9. FUNCTIONAL DESCRIPTION FOR THE CONTRACTOR

For proper management of this service contract, the Contractor shall provide the following personnel and services, which shall be in place when the framework contract is signed:

a) Customer manager supervising the tender;
b) Service desk and customer help desk.

9.1. CUSTOMER MANAGER

The customer manager (CM) shall be the interface between the Contractor and the European Parliament and will be responsible for performance of the framework contract.

The CM will also be responsible for producing statistics relating to the contract, relations with the European Parliament's various technical units and change management.

The CM shall attend regular meetings with the European Parliament and ensure European Parliament satisfaction. He will produce reports and minutes of meetings,

and manage presentations and demonstrations. He will identify and resolve any problems resulting from this contract.

9.2. SERVICE DESK

Problems concerning maintenance services shall be submitted to a single telephone number on the Contractor's premises.

9.3. MEETINGS

The meetings indicated below will be part of the services provided to ensure consistent quality.

Progress meetings with the express purpose of assessing the service quality and the quality of the analyses of statistics provided by the Contractor will take place every quarter. The date and place of the next meeting will be agreed at the end of the meeting.

Meetings in addition to the quarterly meetings may be organised by the European Parliament in order to resolve any specific problems.

10. PROJECT MANAGEMENT METHODOLOGY, TASKS AND DELIVERABLES

Project Management activities shall be conducted in accordance with internationally recognised methodology by specific Project Management professional bodies.

In the technical proposal, the Tenderer shall submit detailed description of Project Management methodology that will be used in each project and will describe how the proposed experts will be involved.

The Tenderer shall describe how the progress in project activities will be reported. The Tenderer shall describe in detail the reporting procedure in terms of reporting periods, forms used, the information to be contained in reports, and the progress report approval circuit.

The Tenderer shall describe in the project how communication between project participants will be ensured.

The Tenderer will describe in the technical proposal how problems that may arise during the project will be solved. The procedures and forms to be used for management of problems, their escalation and resolution will be presented.

The Tenderer will present in the technical proposal the plan and test of acceptance to be used in the project for provisional acceptances and the final acceptance. The plan and tests divided by stages and the forms for provisional and final acceptance shall be submitted.

The Tenderer has to size the project management team so that, for the entire duration of the contract, the people responsible for carrying out this activity are available on-site to ensure the best implementation of the project.

The Proposal shall include an initial project plan, with as many details as possible, to meet the requirements of staging and the project deadline.

The implementation of the entire System should cover the following steps.

a) Analysis
b) Design
c) Development /configuration, including internal testing
d) Implementation
e) Acceptance Tests
f) Training of users
g) entry into production

10.1. PHASE I: ANALYSIS AND DESIGN OF THE SYSTEM

The Tenderers should describe in detail the methodology by which analysis and design activities will be conducted.

The Tenderers must submit along with the proposed methodology, the procedures and work instructions for analysis and design implemented within their organisations. The Tenderers shall describe the tools that they use so that to ensure:

a) collection and record of requirements
b) full coverage of the project theme
c) requirement changes tracking
d) traceability of requirements from project objectives to technical specifications
e) modelling of processes and activities in accordance with recognised modelling and representation standards (UML or equivalent)

The Tenderers must submit detailed deliverables that will result from appropriate service delivery at the stages of development and design. The description should include at least the following information:

a) form/forms to be used for each deliverable
b) description of the contents of each deliverable
c) how the content of deliverables will be interpreted

The first phase shall include the following tasks:

Task 1.1: Hold workshops with the stakeholders and prepare a detailed requirements specification/design for the purpose of completing the development of the requested solution. The Contractor will propose a design that is aligned with the current Technical Requirements of the EVS and it shall be approved according to the project governance.

Task 1.2: Prepare detailed requirements and technical specifications for the hardware and software components. The specification shall be prepared in a way to satisfy therequirements for the EVS to operate in the EP's infrastructure, including the installation, taking into consideration that such requirements shall enable the efficient operation of the System for the next ten years.

Task 1.3: Prepare a detailed implementation plan for the EVS. The Contractor can propose that certain functionalities be realised in different phases, according to the detailed requirements specification, discussions with the stakeholders and possible specifics of solution offered by the Contractor.

Task 1.4: Prepare monthly project management status reports regardless of the project sub-phase, which includes at least the overall project status, reporting of issues, achievements and planned activities, milestones, deliverables and reporting of risks. Besides this regular monthly project progress reporting requirements, any issues or foreseen risks that could impact the project progress shall be reported immediately.

10.2. PHASE II: DEVELOPMENT AND CONFIGURATION OF THE ELECTRONIC VOTING SYSTEM OF THE EP

The Tenderer should describe in detail the methodology by which they will conduct development/configuration and internal testing activities and demonstrate the integration of these procedures with analysis and design procedures.

The Tenderer shall submit with the proposed methodology, the procedures and work instructions for development/configuration and internal testing implemented within their organization

The Tenderer shall submit detailed deliverables that will result from appropriate service delivery at stages of development / configuration and internal testing.

The second phase shall include the following tasks:

Task 2.1: Establishment of the configuration/development and test environments on the EP's infrastructure.

Task 2.2: Development/Configuration of the electronic voting and all other functionalities according to the prepared detailed requirements specification.

Task 2.3: Establish data exchange and integration with other related EP applications.

The tenderer shall pay special attention during the methodology preparation and during its implementation to EP to the requirements related to the:

a) **Integration and full compatibility of the proposed solution with the already developed procedures, processes and systems in place and**
b) Uninterruptable operation of the current system until Commissioning is completed by the Contractor.

10.2.1. INSPECTIONS AND RELATED SERVICES

10.2.1.1. INSPECTIONS AT SYSTEM DEVELOPMENT STAGE

Contractor shall keep a system development version in the Development Environment.

At least 70% of the developed specific system components shall be subjected to unit testing.

Contractor shall regularly update the components of the development environment and support the regular reports with system demos.

Contractor shall document and address the EP's requests that will be classified into defects and modification requests if appropriate.

10.2.1.2. INSPECTIONS AT SYSTEM DELIVERY STAGE

Contractor shall install the system components according to the installation guidelines.

Contractor shall configure the system components on the integrated environment.

Contractor shall modify the configuration parameters according to the installation guidelines.

Contractor shall demonstrate the functionality of all the system components.

10.3. PHASE III: TESTING, DEPLOYMENT IMPLEMENTATION AND FINALISATION OF SYSTEM INSTALLATION

The Tenderer should describe in detail the methodology by which they will conduct implementation activities.

The Tenderer shall submit, with the proposed methodology, the procedures and the instructions for implementation within their organisation and demonstrate the integration of these procedures with procedures related to development/configuration and internal testing.

The Tenderer shall submit detailed deliverables that will result from the provision of appropriate services in the implementation phase. The description should include at least the following information:

a) form/forms to be used for each deliverable description,
b) description of the contents of each deliverable,
c) description of how the content of deliverables will be interpreted

The Tenderer shall describe the procedure of user training. The procedure should include at least the following information:

a) description of courses and expected results
b) course assessment method
c) trainee assessment method
d) forms to be used

The third phase shall include the following tasks:

Task 3.1: Carry out the functional testing of the new solution.

Task 3.2: Carry out the testing on performance.

Task 3.3: Carry out security testing of the new developed solutions.

Task 3.4: Training on using the Voting functionalities both for EP staff and Contractor technicians.

Task 3.5: Deployment and acceptance of the solution in the "production" environment of EP's infrastructure according to the plan.

10.3.1. PRE-COMMISSIONING TESTS

In addition to the standard check-out and set-up tests, the Contractor shall perform the tests on the System and its Subsystems before installation is deemed to have occurred and the EP issues the Installation Certificate.

EP will check if all the automatic mechanisms of integration with other computer subsystems meet the requirements.

The Contractor shall provide details about the testing method and the achieved results.

The Contractor shall perform the security testing at least according to OWASP Top 10 vulnerabilities. The Contractor shall provide details about the testing method and the achieved results. Contractor will conduct the performance testing at least for two components: load testing and stress testing.

The criteria for provisional acceptance testing are:

a) 100% of the nonconformities detected at delivery were addressed;
b) 100% of the security tests are successful;
c) performance is equal or better than required;
d) No critical nonconformities and less than 2 major nonconformities and 30 average and minor nonconformities were detected.

The acceptance date will be the point when all the nonconformities detected when the system is put into production have been addressed.

10.3.2. CONDITIONS OF INSTALLATION AND OF COMMISSIONING

All installation and commissioning work performed by the Contractor on the European Parliament's premises shall be carried out under the supervision of the European Parliament and shall comply with the best practices of the sector and with the procedures in force in the European Parliament.

The proposed items of equipment shall be capable of being incorporated into the infrastructure of the European Parliament completely and harmoniously, particularly with respect to items of equipment and elements already in use.

The contractor shall be responsible, among other things, for:

a. Delivering the installation project;
b. Supplying complete and detailed design drawings and documents (including working diagrams and details) of all the works carried out;
c. Bringing to site, deploying, and removing on completion, all tools and material needed for the works;
d. Removing rubbish, packaging, etc. arising from his installations;
e. Cleaning the site;
f. Repairing any damage caused by his workforce;
g. Providing labour and all the instruments needed for the tests;
h. Carrying out the tests and preparing test reports.

The Contractor shall take particular care when working in the various rooms of the European Parliament, and especially in the two hemicycles. In order to do this, the protection and the restoration of property at and around the locations of the works shall be entirely the responsibility of the Contractor.

10.3.3. ENTRY INTO PRODUCTION

The Tenderer shall submit the plan to be used upon System's entry into production. The submitted plan shall take into account the logical links between subsystems so as to ensure a coherent production entry.

10.3.4. TESTS AND FORMAL ACCEPTANCE

The Contractor shall prepare and submit all needed documentation for tests procedures performance in advance.

The Contractor will perform tests on the System and its Subsystems following installation to determine whether the System and the Subsystems meet all the requirements.

EP will check the entire cycle and the related technical performance through operational tests.

The acceptance criteria when the EP will consider the system formally accepted are as follows:

a) All the positive scenarios have been successfully performed and operational;
b) At least 80% of the negative scenarios must be successfully handled;
c) No testing scenario will corrupt the data integrity.

The system shall be deemed as finally accepted when it will operate according to the normal parameters and no major operation deficiencies are detected at least during three months after provisional acceptance (see below).

Major deficiencies shall be considered the errors that cause a situation that requires the involvement of the System Administrator or even system developers.

10.3.4.1. PROVISIONAL ACCEPTANCE

The proposed solution shall go through thorough unitary and system testing procedures, followed by a formally documented test report. These tests shall be carried out by and under the responsibility of the Contractor, and the results report shall be communicated to the European Parliament.

The European Parliament reserves the right to attend these tests.

All expenses directly or remotely in connection with these tests, including the acquisition or hire of specific equipment, travel expenses, etc., shall be borne by the Contractor. The test reports provided by the Contractor shall cover, among others, at least:

a. Compliance with the conditions of installation;
b. The condition in which the site is left by contractor;
c. Compliance with safety regulations (filling-in work, mountings, labelling, etc.);
d. Quality of the work;
e. An as-built documentation set, enabling a verification that the installed equipment and services match the contract specifications;
f. Physical inventory of the equipment installed and the extent to which it tallies in terms of number, quality and marking with the description provided by the successful tenderer;
g. Testing of input and output connections between the EVS and external equipment (database servers, EP applications, etc.);
h. Testing of all the constituent parts of the EVS;
i. Intensive full-scale operational tests on the system;
j. Compliance with the general system performance levels;
k. Compliance of the provided documentation with the list prepared by the Contractor during the project definition phase;
l. The validation of the incorporation of his proposals into the European Parliament's environment.

This test report shall be exhaustive and shall show, in particular, any failures and/or malfunctions encountered, even if they were corrected immediately as part of the test phase.

The European Parliament will prepare a provisional acceptance certificate on completion of the test phase. This certificate will include any reserves relating to non-compliance with the conditions specified in the contract.

If the results are not satisfactory, there will be an adjournment, of which the Contractor will be notified. The Contractor will be required, at its own cost, and within a maximum of 10 working days with effect from notification, to carry out any replacement, modification, repair, addition or finalising needed.

In the event of this period of time being exceeded, the European Parliament reserves the right to apply penalties in connection with the works, as described in the SLA.

10.3.4.2. FINAL ACCEPTANCE

Provided that all the documentation has been submitted on paper and/or electronically by the successful tenderer to the EP and that the specified training has been carried out, final formal acceptance will be granted by the European Parliament when the solution provided by the Contractor (all the items of hardware equipment and /or software forming part of the contract) has functioned satisfactorily for an assessment period of three months following provisional acceptance. This assessment period shall include at least two Parliamentary sessions. The system shall

demonstrate, for the whole of the assessment period that the solution provided by the contractor satisfies all the service quality requirements that are specified in all the documents belonging to this Call for Tenders.

This three-month assessment period is known as the Checks in Regular Service (CRS) period, or “période de VSR” in French (Validation en Service Réel).

If the service quality requirements are not met during the CRS period, a new CRS period shall start after bringing the needed changes to the solution, for a further period of three months.

On completion of a successful CRS period, final formal acceptance will be granted, leading to the transfer of ownership, the start of the warranty period and the start of invoicing.

During the CRS period no other payment / invoicing is allowed. During this period the Contractor must provide exactly the same services as for normal exploitation: operation, assistance, support and scheduled presence.

10.3.5. ASSISTANCE WITH COMMISSIONING

The Contractor shall provide assistance with commissioning (commissioning in the sense of “placing in service”, “putting in production”). This shall cover at least the first two plenary sessions and /or committee weeks (where applicable). This assistance shall comprise the on-site provision of one or more qualified engineers or technicians who have taken part in the development and installation of the project and know the configuration of the installation. Their duties shall be, in particular, to carry out any necessary modifications and to ensure optimal use of the systems for operation.

During this assistance phase, the full transfer of knowledge shall take place, to allow the European Parliament's teams to master all the functionalities required by this specification and/or proposed by the Contractor in his tender.

This assistance with the commissioning shall also include:

- The preparation of the operating procedures for use by the operators and of instructions for the various people involved (see also Chapter 14),
- Complete assistance, operation / exploitation of the systems installed and presence of technicians whenever requested (see Chapter 12.1).

10.4. PHASE IV: POST-IMPLEMENTATION SUPPORT

The fourth phase shall include the following tasks:

Task 4.1: Technical support to correct any shortcomings related to the functioning of the System for a period of 24 months after the final acceptance.

Task 4.2: Troubleshooting of problems related to the development/configuration of the functionalities not identified during testing and acceptance phases in a warranty period.

Task 4.3: Additional knowledge transfer if it is deemed necessary by the Client staff in the warranty period.

Task 4.4: Post-implementation support according to the requirements and the SLR specified within the Service Specifications

Task 4.5: Provide any available updates and upgrades to the installed IT solution, including DBMS, other third-party software.

10.4.1. WARRANTY

For 24 months following final acceptance, the successful tenderer must provide an unconditional free of charge warranty (parts and labour) in respect of the system and all its component units (whatever their origin).
The Contractor shall undertake to replace any defective item of equipment the malfunctioning of which is not the result of incorrect use and to guarantee the supply of all the components (or their equivalent) used in the system for at least 10 years.

10.4.2. GUARANTEE OF DURABILITY

With effect from the signature of the contract, the Contractor shall guarantee the durability and/or availability of all items (hardware and software) provided under this tender for a minimum of 10 years.

In the event that the provided hardware and/or software is no longer commercially available and/or supported by their constructor, the Contractor shall also guarantee they can be upgraded and shall remain operational. In case replacement with a software/hardware different from what was initially foreseen in the contractor's tender and which is necessary to ensure the durability of the systems, such replacement will be subject to an amendment of the contract, which implies that prior approval has to be obtained from the European Parliament.

The solutions proposed to the European Parliament shall be based on the usual standards in the domain. The use of proprietary (non-standard) interfaces or protocols shall be subject to a declaration by the Contractor, failing which, the Contractor shall, entirely at his own cost, upgrade the installations provided so as to meet the usual standards in the domain.

10.5. DELIVERABLES

All the deliverables shall be as well delivered in electronic form.

1) PMQP - Project Management and Quality Plan.
2) System Architecture Document.
3) Software Detailed Design Document;
4) Compiled and documented source code (including third instruments and libraries, where applicable);
5) Software installation package (including third instruments and libraries, where applicable).
6) System configuration files.
7) Installation instructions.
8) Operations instructions, Manuals for users and administrators (in English and French);
9) Maintenance instructions.
10) Functional, performance and security testing plans and reports;
11) Post-completion drawings.
12) Software licenses (where applicable);
13) Documentation of APIs used for integration with other IT systems;
14) Update of the EVS 's technical documentation

Documentation shall be provided in English and it will become the property of the European Parliament. The EP will be allowed to use, reproduce, and send it to third parties and to other European institutions for processing requirements. On the other hand, it shall not be sent to third parties without the European Parliament's agreement.

The documents are living documents. Even if they are already formally approved, they can and shall be updated throughout the project lifecycle whenever necessary, to accurately reflect any modifications.

10.5.1. PMQP

The PMQP is the reference file for the execution of the project. It is a single file i.e. it is not separated in Project plan and Quality plan. The PMQP shall contain, at its minimum:

a) The project purpose, scope, time plan, definitions (e.g.. of acronyms) and project description.
b) A description of the Phases of the project. (The steps to be taken would be listed as part of each phase). It will also define the deliverables that are to be produced at the end of each phase.

c) In order to advance from one phase to another (and depending on the complexity of the project) a formal or informal approval of the deliverable will take place.
d) The list of all the documents that will be created during the lifecycle of the project execution.
e) References to external files.
f) The definition of the Progress Reports, especially regarding their contents and their periodicity (weekly, monthly etc.). It should also reflect the changes between the previous and actual time plan.
g) The communication plan, including who are the contact points (including email addresses) for each phase of the project.

The documents shall be supplied in English or French.

A Change Record shall be implemented to the documents, which will include the version number, date, author, revisers, and a summary of the modifications.

Each document mentioned in the beginning of this chapter should represent a separate file.

11. PROVISION OF NEW EQUIPMENT AND SOFTWARE DEVELOPMENT

11.1. GENERAL WORK INVOLVED

Identifier	Description
RQ179	In general, tenderers will be required to carry out all the work and provide all the supplies needed for complete installation of the system.
RQ180	Tenderers shall familiarise themselves with the existing premises and equipment, and with technical documentation and plans.
RQ181	If, during the implementation of the contract, the successful tenderer finds shortcomings or contradictions on the basis of this information, or find that it is not possible to follow good practice, they shall notify the European Parliament accordingly.
RQ182	Tenderers shall acknowledge that the meeting rooms and control rooms will have cabinets, racks, cable runs etc. that are shared between different services in the EP (e.g. audio-visual and conferencing). The tenderer therefore

Identifier	Description
	should take into account the physical space allocated to the EVS and the other existing systems.
RQ183	The tenderer must accept responsibility for successful integration and interoperability with the existing installations and applications until their decommissioning.

Tenderers are reminded that the following form part of the contract:

Identifier	Description
RQ184	Drawing up the implementation plan;
RQ185	Provision of the Project Management and Quality Plan (PMQP)
RQ186	Provision of complete and detailed drawings (including detailed working and schematic diagrams) for all the works proposed;
RQ187	Provision and removal of site equipment;
RQ188	Removal of debris, packaging, etc. From the installation site;
RQ189	Site cleaning;
RQ190	Repair of any damage caused by the firm's staff during installation of the equipment;
RQ191	Provision of manpower and all measuring instruments needed for testing;
RQ192	Carrying out tests and drawing up the test report.
RQ193	Post-completion drawings, and instructions and descriptions concerning the equipment and operating procedures, to be supplied when the works are accepted.
RQ194	The suppliers' warranties and insurance certificates;

11.2. EQUIPMENT

Recapitulation of the equipment referred to in the tender documents:

11.2.1. EQUIPMENT PER ROOM

- Voting terminals installed in the meeting room;
- President console / monitor displaying the results of votes for the president on the rostrum,
- Voting control unit for the rostrum,
- Speaking time management unit for the rostrum (possibly incorporated into the voting control unit for the rostrum).
- voting control PC,
- Interpreter displays display units for the interpreters (two per booth).
- Provision for the connection of a printer (supplied by the EP) for printing the results of votes
- Wall panels for displaying the results of votes in the meeting rooms. (excluding hemicycle)
- All software and firmware.
- Rack incorporating power supply, management unit, connections, etc.
- Power supply and specific data cabling. The network cabling will be supplied by the EP.
- Network controlled power switch.
- KVM switch, when necessary.
- A simplified installation comprised of Command Console and Video Gateway + Display Panel is also possible, when the system is installed in a room simply to monitor the speaking time.

11.2.2. EQUIPMENT SHARED AMONG ALL ROOMS

- Remote control system for start-up, parameterisation and checking.
- Card reader / writer to encode the voting cards

11.2.3. SPARE EQUIPMENT

Identifier	Description
RQ195	In order to ensure continuity of operation of the EVS the contractor will be required to provide a certain number of replacement items of equipment, particularly all the items

Identifier	Description
	that he, as a tenderer, considers necessary in order to comply with the obligation to achieve results included in the Service Level Agreement (hereinafter 'SLA', Annex I.A).
RQ196	The spare kit shall be ready available and stored on both sites in order to allow a timely intervention according to the SLA.

11.3. SOFTWARE

The proposed EVS shall meet the following requirements:

Identifier	Description
RQ197	The EVS must coexist with the existing Voting infrastructure of the EP on both sites (Brussels and Strasbourg). The EP will provide all needed technical documentation, support and access related to existing equipment.
RQ198	The EVS shall be organized in modules designed to ensure the proper functioning of Parliament's plenary room, committee meeting rooms, management of voting cards and the related processes.
RQ199	The System may be connected to a module that allows MEPs to register their presence in the Chamber or meeting rooms.
RQ200	The language of the System's Graphical User Interface must be English.

11.3.1. SYSTEM ARCHITECTURE AND ENVIRONMENTS

Identifier	Description
RQ201	The system shall be conceived in a three-tier architecture. Presentation, Business Logic and Data Layer should be separated.
RQ202	The development, pre-production and production environments shall be separated.
RQ203	Most of the applications will only be accessible from within the EP VLan dedicated to the electronic vote.
RQ204	Client applications may be able to be run in Linux or Windows operating environments such as CentOS, Red Hat, Windows 8.1, 10 or later version
RQ205	The components that form the Business Logic Level shall be elaborated in modern widely used programming languages (as specified in the TIOBE programming community index).
RQ206	The technologies present at the Business Logic Level shall allow the integration of existing components at the EP, or which are being or will be developed for EP by the interfaces available.
RQ207	The data model implemented at Data layer level shall be normalized, except for the Data Warehouse.
RQ208	The application data shall be accessed only through the components contained by the Business Logic Layer.
RQ209	The data model implemented at Data layer level shall be properly documented. The documentation shall contain both the technical description of the data layer and the semantic description
RQ210	The data semantic description is the association of data structures with entities and their properties, with the aim to explain the meaning of the data structures for maintenance, audit and reporting purposes.

Identifier	Description
RQ211	The architecture of applications shall assure the integrity and accuracy of data at the accessing and changing of data simultaneously by several entities (users, internal processes, external applications.

11.3.2. EP DEVELOPMENT STANDARDS

Identifier	Description
RQ212	The contractor shall respect the standards described in the Annex I.O - EP_IT-Environment-and-Development-standards. There can be exceptions when the Software is residing and used solely in the restricted Vote VLAN, but in order to interface with other systems in the EP the standards shall be respected.

11.3.3. TECHNOLOGICAL PLATFORM

The technological platform comprises the software and hardware components needed to assure the operating environment in which the applications will run.

The technological platform includes: development platforms and programming languages in which the code of applications is elaborated, database management services, operating systems based on which the components of applications can run, special software necessary to be installed for the correct running of applications, the hardware platform on which the components of applications can run, etc.

Note: The dedicated equipment such as consoles, voting terminals and terminal concentrators are excluded from the requirements below.

Identifier	Description
RQ213	The components of applications shall be independent from the hardware technological platform on which they run (they shall run on at least two types of processors from different manufacturers).
RQ214	The technologies that exist at the level of technological platform shall be homogeneous (minimal number of

Identifier	Description
	different technologies, e.g. different operating systems for middleware and database).
RQ215	All the components of applications (e.g. middleware, databases) shall run on platform with operating systems from the Windows Server or Linux family.

11.3.4. FLEXIBILITY AND MAINTAINABILITY

Identifier	Description
RQ216	The management solution may allow easy deployment of new modules / updates by the software developer as well as rolling back to the previous version.
RQ217	The software solution shall allow the definition and customization of entities stored in the application (e.g. definition of new properties).
RQ218	The software solution must allow the definition and customisation of rules implemented in the application.
RQ219	The architecture of the software system shall allow the implementation of changes in a simple way at application level. The perimeter affected by changes shall be minimal and the components needed to be tested in the result of changes, clearly identifiable.

11.3.5. AUDIT, MONITORING AND SECURITY

In terms of IT Security, the contractor shall implement the following technical safeguards. The NIST publications indicated below may be used as a reference:

Identifier	Description
RQ220	Implement an anti-malware software on EVS components *(NIST Special Publication 800-83)*. This software shall allow:

Identifier	Description
	⁃ Scanning critical host components such as start-up files and boot records; ⁃ Watching real-time activities on hosts to check for suspicious activity (abnormal behaviour); ⁃ Monitoring the behaviour of common applications; ⁃ Scanning files for known malware (based on signature); ⁃ Identifying common types of malware as well as attacker tools; ⁃ Disinfecting files (quarantine malicious files).
RQ221	Implement an incident detection and logging infrastructure, also known as *Security Information and Event Management* - SIEM *(NIST Special Publication 800-92)*. This infrastructure should allow: ⁃ Logs analysis and monitoring; ⁃ Logs correlation; ⁃ Alerting capabilities; ⁃ Forensic investigations.
RQ222	Implement Network Communications media security by: ⁃ Implementing link encryption on all communication media;
RQ223	Implement the segregation of duties for all privileged level functions on EVS such as: ⁃ System configurations ⁃ Modification of access rights ⁃ Deletion of system and activity logs
RQ224	Implement a role-based access control mechanism to ensure: ⁃ Users have the access rights required to perform their job functions ⁃ Changes in the users' job function reflects their access ⁃ The system does not support privilege escalation

Identifier	Description
	) Accesses are periodically reviewed
RQ225	Implement an integrity check solution to detect unauthorized modification of information and configurations *(NIST Special Publication 800-53 Rev. 4)*

The contractor shall work closely with the EP on implementing the following administrative tasks related to IT Security:

Identifier	Description
RQ226	Implement a patch and vulnerability management process for all EVS components *(NIST Special Publication 800-40 version 2.0)*: This process should be composed of:) System inventory and assets criticality ranking;) Defined roles, responsibilities, and actions to manage patches and vulnerabilities on EVS components;) Defined tools to perform vulnerabilities assessments (i.e. vulnerability scanner).) Monitoring of technical vulnerabilities on EVS components;) Testing and prioritization of remediation.
RQ227	Implement regular systems security tests to ensure the correct behaviour of EVS components *(NIST Special Publication 800-115)*. These security tests should contain:) Security assessment of hardware and software components;) Ruleset and configuration reviews and logs analysis;) Documentation review.
RQ228	Implement or subscribe to a Business Continuity and Resilience program. This program should contain:) Business Continuity and Disaster Recovery Plans;

Identifier	Description
	⁃ Defined roles and responsibilities for business continuity; ⁃ Escalations and communication processes.
RQ229	Document technical procedure for management and modification of systems settings. Keep these procedures up to date and have them communicated to operators.
RQ230	Define and enforce baseline security requirements on all EVS components. The requirements should include: ⁃ Define the minimum length of encryption keys; ⁃ Specify the encryption algorithms to be used; ⁃ Enforce the encryption of all data in the system including information on authentication token); ⁃ Enforce and air gap networking against connection from untrusted networks; ⁃ Implement system hardening
RQ231	Define and enforce access control policies and standards on the following: ⁃ User access provisioning ⁃ Management of privileged access rights ⁃ Management of authentication information for users ⁃ Review and removal of access rights - Disciplinary actions
RQ232	Conduct regular security awareness and training programs to enlighten all EVS stakeholders on information security ideals such as: ⁃ Use of external and non-corporate devices ⁃ Handling of sensitive users' personal information ⁃ Recognizing and responding to email with malicious contents ⁃ Responding to potential fishing attacks ⁃ Implement a disciplinary process

The Contractor shall also follow the recommendations done by the EP CISO:

Identifier	Description
RQ233	The contractor shall be aware of and follow the guidelines present on the documents annexed: J STD-01-BSR - Cybersecurity Policy - Standards - ICT Systems Baseline Security Requirements. J STD-02-WAP - Cybersecurity Policy - Standards - Web Application Security Requirements. J STD-04-SLM - Cybersecurity Policy - Standards - Security Logging and Monitoring. J STD-05-TLS - Cybersecurity Policy - Standards - TLS Technical Requirements.

11.3.6. SOURCE CODE ESCROW

Identifier	Description
RQ234	For products that are not intellectual property of the European Parliament, the Source Code and its Documentation shall be kept by an Escrow Agent according to the annexed document “Source Code Escrow”.

11.3.7. MANAGEMENT OF EXCEPTIONS

Identifier	Description
RQ235	The proposed software application will process all the errors and exceptions produced in the operation of applications.

11.3.8. CONTINUITY AND RESISTANCE TO BREAKDOWNS

Identifier	Description
RQ236	The simultaneous running of internal processes of the system will not have an impact on the general performance of the system. Otherwise, the Tenderer shall include in the guidelines of the system administration and operation of applications the information regarding the processes that can affect the performance of applications and his recommendations regarding the simultaneous running of these processes.
RQ237	The proposed system shall have instruments implemented for the execution of backup copying procedures and management of historical backup copies.
RQ238	The proposed system shall have mechanisms of assurance of data integrity in case of breakdown of any components.
RQ239	The proposed system shall have mechanisms of operative restoration of availability and accessibility of applications in case of continuity incidents.
RQ240	The architecture of the proposed system shall be resistant to breakdown of components and shall not have single breakdown points (SPOF)
RQ241	Redundancy shall be used as much as possible to avoid major interruptions.
RQ242	In the hemicycles, for additional security, the EVS **must be redundant (duplicated) at all levels**, including power and data cabling, vote management pcs and database management, video generators, concentrators etc.
RQ243	The future committee room installations must also be redundant, at least at the management unit level.
RQ244	Tenderers shall specify the procedures and solutions to be applied, in the event of system failure, to allow voting to resume as soon as possible.

11.4. INSTALLATION WORK

We remind that before any work commences, the successful Tenderer shall submit the detailed plans and drawings for the projected work to the European Parliament for approval.

Identifier	Description
RQ245	The successful tenderer shall assemble the equipment and connectors in 19" racks, in accordance with the possible arrangement of the service room and the number of units necessary. The racks shall be accessible from the rear and have a lockable glass door at the front.
RQ246	Hook arrangements, in particular for the display panels in the Committee room, shall be secure. The operating staff will be given instructions concerning dismantling and assembly procedures, which will be set out in the technical documentation to be submitted by the successful tenderer. Should special tools be needed to dismantle and reinstall equipment, the successful tenderer shall supply a set of such tools.
RQ247	With regard to the work on site, tenderers should note that the work will be carried out within buildings and installations which are in use.
RQ248	Work on site shall therefore be carried out with the utmost care and respect all mandatory security and safety measures.
RQ249	It is essential that the work schedule be compliant with the calendar of activities of the EP.

11.4.1. CABLING

On security grounds, the system must be regarded as being separate from the European Parliament's LAN to prevent any intrusion. In particular, it will have its own VLAN.

The European Parliament draws the attention of tenderers to the fact that they shall pay particularly attention to:

Identifier	Description
RQ250	Manufacturing quality of the cabling, in particular with regard to immunity to electrical, electromagnetic and radio interference from various sources, and to the fact that the cabling shall not itself generate such interference.
RQ251	Power supply cabling shall easily bear (with at least 30% spare capacity) the load needed to power the system. Data cables shall be able to bear at least twice the maximum expected transfer rate.
RQ252	Quality includes full labelling of the installation, which means that each cable shall be physically identified (e.g. By means of a unique marker at each end of the cable). All visible components, in particular interfacing facilities, shall be secured against forcible removal and deliberate or accidental damage;
RQ253	Installation of the cabling, which shall use the cable runs (ducts, cable trays, etc.) Provided for the purpose. The successful tenderer shall be subject to an obligation to achieve the required result. He may use facilities provided specifically for the voting equipment, in particular ducts in furniture, cable sheaths and cable trays for the audio network assigned to the system, but shall carry out any additional work necessary for the system to be properly installed (including drilling holes, re-filling them, support structures etc.) after receiving approval from EP;
RQ254	All openings made for the passage of cables shall be re-filled by the successful tenderer, who shall reinstate the fireproofing to the level required by the standards applicable throughout the building. He shall restore the soundproofing conditions which existed previously.

11.4.2. CENTRAL POWER SUPPLY

Identifier	Description
RQ255	Under the contract the successful tenderer shall install the power supply for the Systems on the basis of no-break power inputs provided by the European Parliament.
RQ256	On the basis of the existing PE no-break electrical boards, the successful tenderer shall provide, install and connect all the cabinets, outlet boxes, cables and other infrastructure components needed to set up an independent power distribution network allowing all the equipment forming part of his system to be connected.
RQ257	Particular attention shall be paid to the compartmentalisation of EP facilities for fire protection purposes. Any passage through partitions will therefore have to be fire resistant (30 minutes or 1 hour, depending on the case). The use of light-current cable runs to carry heavy-current cabling is prohibited. In the absence of an ad hoc cable run, the successful tenderer will have to install his own cable runs or trunking.
RQ258	An electrical cabinet, under the responsibility of the successful tenderer, shall house: J Circuit protection devices, J Automatic power-up features (centralised control), J The main switches.
RQ259	The server racks which are located in server rooms are equipped with a double power supply, i.e. a no-break system and emergency power supply.

11.4.3. REMOVAL OR REUSE OF THE CURRENT EQUIPMENT

The Contractor shall be responsible for uninstalling and removing the current equipment elements with great care and in a non-destructive way so that they could be re-used by the European Parliament, for example for installation in other meeting rooms.

All of the procedures for uninstalling and removing the current elements will be reviewed at the project initialisation meeting. This removal operation on each of the two sites shall be carried out in coordination with the European Parliament's teams. It shall be programmed and organised so as to provide continuity of use of the chambers / rooms.

Furthermore, tenderers shall provide a re-use and recycling service for a specified inventory of equipment that has reached the end of its service life. They shall report on the proportion of equipment re-used or recycled. The tenderer shall demonstrate how they will carry out the following aspects of the overall service: collection; remarketing for re-use in the EU (if applicable) dismantling for recycling and disposal etc.

Preparation of items for re-use, as well as recycling and disposal operations shall be carried out in full compliance with the requirements in Article 8 and Annexes VII and VIII of the (recast) WEEE Directive 2012/19/EU, as well as the relevant implementing national law.

The European Parliament reserves the right to determine unilaterally the equipment that will be processed using the proposed re-use, recycling and disposal service.

11.4.4. ENVIRONMENTAL DATA

All equipment proposed by the tenderer shall be chosen taking environmental considerations into account. In particular:

Identifier	Description
RQ260	a. energy consumption should be as low as possible; b. heat production should be as low as possible; c. noise should be as low as possible; d. recycled material should be used for packaging.

12. OPERATION, MAINTENANCE, TECHNICAL ASSISTANCE AND SUPPORT SERVICES

The operation, maintenance, technical assistance and support services, guarantee the uninterrupted functioning of the Electronic Voting Systems (EVS) and the availability of all their functionalities. The assistance, maintenance and exploitation will be related to the installations implemented by the successful tenderer.

The Contractor shall be responsible for these services that are composed of:

a) Operation
b) Preventive maintenance;
c) Corrective maintenance and support;c
d) Progressive maintenance;
e) Technical assistance;
f) Service management and improvement.

The main objectives of the services required by the European Parliament from the Contractor are:

a) To guarantee the proper functioning of the EVS, in accordance with the service quality criteria specified, by means of preventive and corrective maintenance;
b) To provide support services to the European Parliament staff and operate the system when requested;
c) To guarantee a maximum level of security for the hardware and software of the architecture (firmware and software updates, installation of hotfixes, etc.);
d) To keep a log book to allow the European Parliament staff to be fully capable of monitoring and controlling the operations carried out and to have a complete and accurate view of its status at any time;
e) To provide technical assistance and expertise (troubleshooting) in relation not only with the EVS, but also with its integration and coupling with the various environments, systems and applications external to it;
f) To identify service components or processes that could be improved, and to provide documented and quoted solutions;
g) To implement service improvement, by means of progressive maintenance.

12.1. OPERATION, ASSISTANCE, SUPPORT AND SCHEDULED PRESENCE

The Contractor shall provide on-site technical assistance and support to the European Parliament. He shall determine the size of the technical team on site according to the tasks to be carried on.

Currently, a minimum of 5 technicians (including one responsible) for the technical assistance is required to be permanently on site, divided as follows:

- Strasbourg: two technicians;
- Brussels: three technicians - including the responsible for the technical assistance.

For the future installations, the successful tenderer is required to provide a technical team composed at minimum of the following:

- If the contractor is responsible for the equipment in the hemicycles: 2 technicians are requested per site;
- a third technician is required if the contractor is responsible for 10 or more committee rooms on the relevant site in addition to the hemicycles;
- If the contractor is responsible for committee rooms only, one technician for every 5 committee rooms on the relevant site is requested.

As the number of equipped rooms increases in Strasbourg or in Brussels, it might be necessary to have the numbers above increased in order to maintain the quality of the service provided. During workload peaks (ex.: elections, constitutive meetings etc.), the EP reserves the right to ask the presence of a bigger number of technicians.

No remote access will be allowed in order to provide remote maintenance.

The technicians have to be present in the meeting rooms, when requested by means of a scheduling application (e.g. Outlook) or verbally in urgent situations.

Requests for interventions, technical assistance or support from the users of the system (Committees, MEPs, APAs, EP staff) can be received by email (service mailbox), phone (single service number) or in person.

The technicians can be required to explain to the electronic vote operators how to use the equipment (normally the command console and printer), and might as well be asked to be present during the voting time. Other tasks the technicians are required to perform include (but are not limited to) producing voting cards and provide them to the distribution office, retrieving voting cards left in the committee meeting rooms, etc.

12.1.1. COVER OUTSIDE NORMAL WORKING DAYS

This optional service will be **priced as an hour rate** per requested deployed technician profile.

The service will be requested with a minimal of **4 hours** coverage for a specific number of technician profiles. It will be requested at least 5 calendar days prior to activation. The service fees will be added to the next quarterly maintenance invoice.

Examples of these special requests are presence during Open Days (Saturdays or Sundays) and EYE (European Youth Event), which can start or continue during the weekend.

12.2. MAINTENANCE

The maintenance services have two main objectives:

a) To ensure the satisfactory operation of the entire EVS in accordance with the quality of service criteria required;
b) To allow monitoring of the operations carried out on the system so as to establish their effectiveness and to maintain full knowledge of the system by those operating it.

12.2.1. PREVENTIVE MAINTENANCE

12.2.1.1. SANITY CHECKS

The preventive maintenance shall consist in carrying out, prior to each use and/or outside periods of use as further defined below, all the required tests in order to guarantee the continuous proper operation of the EVS architecture (hardware, software, functionalities, etc.).

It involves early problem detection and systems verification in order to assure that all systems are up and running. This shall be done by a combination of different methods: using remote monitoring and control tools, onsite inspections, check lists etc.

Regarding the systems installed in the hemicycles in Strasbourg and Brussels, the tests are to be done during the days preceding the parliament's sessions, and their aim is to secure the correct working of the equipment and software during the plenary sessions.

Functionality tests are also performed during the hours preceding the system utilization, during the system start-up. There should be enough time to correct any problems in case they occur - and to assure the optimal conditions for the equipment's regular use.

Example of operations to be performed in the **hemicycles** for the EP EVS:

1. Power supply and hardware check of all involved equipment, including servers, clients and devices;
2. Power up the monitor screens in the Press Room (in Strasbourg);

3. SQL Servers control: assure that their data is completely synchronized and coherent;
4. Import data from the EP CODICT Oracle server;
5. Launch the management application ("Process"), setup session and test session;
6. Send the list with the MEP names to the terminals and double-check them with the seat map;
7. Setup the command consoles (Vote mode, timer and speakers);
8. Verify printers and printer connections;
9. Checking all the voting terminals with test cards and test database;
10. Testing all the voting terminals (i.e. open a roll-call-vote and test all buttons and corresponding lights FOR, AGAINST, ABSTENTION);
11. Close the vote and verify the results, the seating and vote cast;
12. Check the vote results on the display screens, the terminals, presidency console, command console and interpreter console, as well as in the Press Room (in Strasbourg);
13. Check the printed vote results as on point 11;
14. Repeat the test voting operation (10-13) for secret vote;
15. Test election mode;
16. Test the communication with the other EP systems via EUGI (ALV, ACTES, MEP places, CARTON, etc.);
17. Test the remote SMIAP control.

The tests above should be performed during the days preceding the parliamentary sessions together with the responsible EP officer. The integrated tests with IT service desk (point 16) will also be performed daily on the session days, before the beginning of each parliamentary sitting. The remaining checks might have to be also redone in case of any update or system restart / reset.

After each series of tests carried out, the Contractor shall prepare a programmed checklist of the associated tests and/or checks, and also a report indicating any recommendations, with a view to improving the operation or the security of the equipment.

Example of Operations to be performed in the **committee meeting rooms** for the EP's electronic voting system:

1. Power supply and hardware check of all involved equipment, including servers, clients and devices;
2. Import data from the SQL Servers (every week or whenever an update is reported;
3. Launch the management application ("Commission") and setup session info, including committee or group info;

4. Check the command consoles for voting mode and speaker time;
5. Check printer and printer connection;
6. Verify the display screens;
7. Check the server monitor and all attached devices;
8. Send the results of roll-call votes held during committee meetings to the related secretariats.

The operations above will be performed each time the system is started, preceding the related committee / group meeting.

12.2.1.2. SANITY RESTORATION

It is also in the scope of preventive maintenance to rectify any fault found during the sanity checks. For example, the following activities are within the scope of preventive maintenance: replacement of items of equipment, upgrading software, installing bug fixes, etc.

Note that the European Parliament representatives shall always be consulted and will give their approval before any such intervention is carried out on the solution.

12.2.1.3. SOFTWARE UPGRADES

The Contractor shall inform the European Parliament of the availability of software upgrades for any item covered by the contract. The information shall include:

a) The version number;
b) Impact analysis;
c) The list of improvements included in the upgrade;
d) The description of the hardware requirements of the software upgrade, with emphasis on changes with respect to hardware requirements of the former software version.

On request of the European Parliament, the contractor shall deploy and test the new software version on the items of equipment covered by the contract. Deploying the new software version includes:

a) The supply of the new version;
b) The installation of the new version on all items of equipment covered by the contract;
c) Any migrations (both hardware and software) required for the installation of the upgrade;
d) The supply of the corresponding documentation.

The preventive maintenance service covers minor and major upgrades, including changes of name of the product, changes of manufacturer of the product, and integration of the product functionality into other more complete products.

12.2.2. CORRECTIVE MAINTENANCE

Corrective maintenance shall consist of correcting any operating faults on one or more parts of the system (hardware and/or software) found during the periods of use.

The Contractor shall be responsible for diagnosing failures, for identifying root causes of problems, and for providing a solution, in order to return the system to normal service in as short a time as possible.

The Contractor shall also be responsible for taking all steps to restore the system, including restoration of backups, reinstallation and reconfiguration of the software, etc.

Each intervention shall be subject to a report for use by the European Parliament staff. The work carried out and the solutions found shall be recorded in a historical maintenance log.

12.2.2.1. 1ST LEVEL ASSISTANCE

Comprises 1st level assistance for all installed systems in the hemicycle and the committee meeting rooms, to solve eventual technical problems which may appear. The objective is to bring the systems back to the operational mode as quickly as possible, by means of replacing the failing hardware with the appropriate reserve parts, or, where applicable, by switching to the backup systems to quickly resume the operations before replacing the failing hardware.

12.2.2.2. 2ND LEVEL ASSISTANCE

Comprises the research and solution of the problems that could not be solved during 1st level assistance and during detection and correction of eventual malfunctioning of the management software. The repairs performed on the malfunctioning parts should be done as soon as possible in order to keep a comfortable amount of spare parts in stock and the backup systems available.

12.2.2.3. 3RD LEVEL ASSISTANCE

Special corrective assistance related to specific problems not solved by 2nd level interventions: comprises the research and correction of specific problems that could not be solved by the 2nd level assistance. To be performed by senior hardware and software staff (technicians, engineers, developers) who do not need to be based on EP premises.

12.3. DEFINITIVE MEDIA LIBRARY

The contractor is requested to maintain a repository that contains the Definitive Media Library and the source codes for all the applications the contractor develops and maintains. The contractor shall have such files under a version control software on a backed up server, and accessible by the related EP staff.

The Definitive Media Library is the collection of the latest, definitive and authorised version of the software that are currently installed on the production servers, including all related configuration items. A copy of these files (only the latest approved version) will be also found on a shared drive accessible by the EP Staff, while the previous versions will be managed by the version control application.

It shall be always up-to-date and all changes to it shall be communicated to and approved by the EP.

All software changes shall be fully documented in a history file.

13. CONTRACTOR'S QUALITY PLAN

Within two months of the signing of the contract, the Contractor shall submit the quality plan which it intends to implement during performance of the contract.

That plan shall include the practical commitments entered into by the Contractor for meeting the conditions laid down in the contract and the specific contract in order to show the quality of service offered, the procedures implemented to ensure and maintain service quality, and the operations report indicators enabling service quality to be measured. It consists in:

a) Describing the procedures,
b) Determining the actors,
c) Identifying the roles and responsibilities of each actor (actions assigned to each actor, sending of warnings in the event of problems, etc.).

The plan, presented in the form of a document on paper, shall be submitted to the European Parliament, which shall approve it.

14. TRAINING OF USERS

The Contractor will prepare the detailed training programme including the training materials for training of the target groups.

The programme and materials shall be approved by the EP before commencement of the training. Materials used during training sessions shall be prepared in English, printed and filed.

They shall contain (but not limited to) detailed explanation of the use of the application(s) for interaction between different users and roles and the use of the system; detailed responsibilities of each role, use of application to implement necessary activities, reporting and other appropriate information.

The training will also contain practical utilisation and walkthroughs for easier understanding of materials.

The Contractor shall prepare, print and deliver training materials in form of manuals.

The Contractor shall also produce instructions for use, How-To's and video tutorials in a format easily accessible and consulted by the EVS users (MEPs, committee secretariats, staff etc.).

The table below describes the different categories and their specific training requirements:

Category	Description	Format of the training, Material to be provided.
MEPs:	The Members of the European Parliament use the EVS to cast their vote, using their voting cards and the voting terminals.	No formal training necessary. Quick reference guide, short video animation and slideshow.
Plenary chairpersons:	The Chairperson will control the speaking time of the speakers and will announce the opening, closing and results of each vote.	No formal training necessary. Quick reference guide, short video animation and slideshow.

Committee meetings' chairpersons:	The Chairperson will control the speaking time of the speakers and will announce the opening, closing and results of each vote.	No formal training necessary. Quick reference guide, short video animation and slideshow.
Presidency Staff:	Staff from DG PRES who deal with the proceedings of the plenary session. They operate the command console during the sittings and assist the chairman in the technical aspects related to the EVS in the hemicycle.	2 or 3 training sessions to cover all staff, estimate 6 to 10 staff members. Quick reference guide, short video animation and slideshow.
Parliamentary Committees Secretariat:	EP Staff who deal with the proceedings of the committee meetings. They operate the command console during the meetings, and assist the chairman in all technical aspects related to the EVS.	There are around 20 committees so estimate between 30 to 40 staff members to be trained. Quick reference guide, short video animation and slideshow.
Electronic vote EP Staff:	They must acquire a thorough knowledge of the EVS in order to be able to interface with all stakeholders. Furthermore, they operate the EVS during plenary sittings following the chairman's instructions, i.e. Open, close the vote and display of results.	4 staff members to be trained. Material: the detailed training material described in the beginning of this chapter, plus the material for all other target groups.

15. NEW FEATURES AND SERVICE ENHANCEMENT

The European Parliament and in particular DG ITEC welcome the use of new technologies to facilitate parliamentary work.

In addition to the technical requirements listed above in this document that aim to update the existing EVS, in the framework of this open procedure for call for tenders, the tenderers must include in their offers a proposal for the following services and related SW development, HW supply and installation:

15.1. TOTEM

The Totem is a device installed at the entrances of both hemicycles and / or committee meeting rooms that will automatically show MEPs their seat in the room and register their presence.

The system will consist in a HW component and a SW component especially designed for that purpose. 2 "totems" are foreseen for each entrance.

Identifier	Description
RQ261	Provision of a device installed at each entrance of the Hemicycles or committee meeting rooms to acquire, by means of voting cards and / or biometric identification, the MEP's entering and exiting from the Hall.
RQ262	LCD colour touch screen display at least 25 inches placed on a support base
RQ263	Badge reader for the voting card
RQ264	Cabling to the vote vLAN
RQ265	The device shall indicate to the MEP his location in the room (for a given session), based on a special synoptic illustration together with the path to follow.
RQ266	The device shall be connected to the EVS's database management system (SQL server) for exchanging and storing information.

15.2. MOBILE ELECTRONIC VOTING SYSTEM

In the context of mobility, the tenderer is required to propose in this chapter a mobile electronic voting system:

Identifier	Description
RQ267	That could be quickly deployed in a room with at least 100 seats, not equipped for the vote, within a short deadline (2 hours).

Identifier	Description
RQ268	That shall have the same degree of **reliability and trustworthiness** as the current fixed, wired system.
RQ269	That shall guarantee the same level of **security and data integrity** as the current system.
RQ270	That could be also suited for a different meeting other than the Parliament's plenary or committee meetings.
RQ271	That allows the MEPs to vote in a committee meeting just like any other wired room, or could even replace the wired installation in the equipped rooms and/or the hemicycle.
RQ272	The terminals will have touch screen displays and badge readers for voter identification or another type of biometric identification.
RQ273	Low power consumption terminals complete with rechargeable batteries, guaranteeing **at least 8 hours autonomy**.

15.3. EXPANDED VOTING CAPACITY

Voting capacity must be expanded beyond the physical capacity of the Hemicycle or a single room. The purpose is to create a virtual hemicycle composed of the Plenary chamber and one or more rooms in parallel.

Identifier	Description
RQ274	Coupling of 2 or more rooms shall be available between all rooms equipped with the voting system in a Master-Slave architecture.
RQ275	The parallel plenary voting session in several rooms shall be transparent for the MEPs and allow the same real time show of the results on all displays and real time transmission of the voting results to PV.
RQ276	For the plenary, the entire voting operations shall be conducted from the voting booth in the hemicycle. The

Identifier	Description
	whole workflow shall be exactly as if voting would take place in the hemicycle.
RQ277	For the committee meetings, the entire voting operations shall be conducted either from the voting booth in the hemicycle or from the voting booth of the Master room.

15.4. REMOTE VOTING

Although the golden standard is the cabled/wired system, in the context of digitalisation, the tenderer is required to propose in this chapter a solution that would allow MEPs to cast their votes remotely:

Identifier	Description
RQ278	Online Remote Voting Solution must replicate the core concept, functionality and all the features of the current existing cabled voting system Including CTE and BC and election mode). Every single phase of voting operations of the main system must also be replicated for the online version.
RQ279	The platform and all applications shall reside on servers in a special dedicated vLAN of the EP network. Just as it is the case today, this vLAN (which shall be secured, autonomous and independent) will communicate with the EP network through the current existing EUGI gateway.
RQ280	The application shall consent voting both in Plenary and for committee meetings.
RQ281	The platform shall be accessible from any type of device: desktop, laptop, tablet or smartphone (either dedicated devices or MEP BYOD) and MEPs can access it either in VPN, VDI or through EPnet.
RQ282	MEP authentication shall guarantee their identity. MEP identification is based on a SSO gateway.
RQ283	To reinforce the authentication, a biometric identification module might be added to the platform.

Identifier	Description
RQ284	Hardware devices such as voting terminals, management console, monitor consoles etc shall be emulated on the online platform from which users and system managers can participate to the sessions remotely through a Web browser.
RQ285	Both the cabled system and the online remote voting platform can be used simultaneously during a voting session. Casting votes shall allow a combination of the following: a) EP premises using the wired voting system; b) EP premises (but not in the hemicycle/committee room ex MEP office); c) outside EP premises.
RQ286	That shall have the same degree of **reliability and trustworthiness** as the current fixed, wired system.
RQ287	The security and data consistency and integrity shall be ensured in the same way as for the current cabled voting system. It shall guarantee the same level of **security and data integrity** as the current system.
RQ288	That could be also suited for a different meeting other than the Parliament's plenary or committee meetings.

15.5. SIMPLIFIED ELECTRONIC VOTING SYSTEMS FOR SMALLER ROOMS

Identifier	Description
RQ289	For rooms with a number of places ranging from 50 to 100, having functions that are linked to a political environment, such as: badge readers for recognising voters and touch screen displays to cast votes.
RQ290	It shall have the same degree of **reliability and trustworthiness** as the current fixed, wired system.

Identifier	Description
RQ291	It shall guarantee the same level of **security and data integrity** as the current system.
RQ292	Connected to the EVS's database management system.

Identifier	Description
RQ293	Electronic voting systems to be used in special rooms where visitors of the European Parliament meet, with a number of places ranging from 15 to 50.
RQ294	Voting can be managed via a touch screen display.

Three different categories of votes are possible:

Identifier	Description
RQ295	For, Against, Abstention.
RQ296	Vote of appreciation (++. + . 0 . - . --).
RQ297	Multiple vote (options a, b, c, d, etc.).

15.6. BIOMETRIC IDENTIFICATION SYSTEM

EP is interested in the application of the biometric identification systems to the voting operations. Such a biometric identification system might be integrated in the voting chain. The data should be contained either in personal badges or in the EVS database. The EP privileges the fingerprint as biometric identification method; however the tenderer is free to propose other methods.

Identifier	Description
RQ298	The system shall guarantee vote casting disambiguation.

Identifier	Description
RQ299	The implemented solution shall remove instances of un-authorised uses of the voting card, enhance security, accuracy and certainty of the voting MEPs' identity.
RQ300	The minutiae will be stored in personal badges or in the EVS database, as **a numerical code.**
RQ301	Risk of using the fingerprints for other purposes shall be completely excluded, safeguarding the privacy and data protection.

15.7. ELECTRONIC NAMEPLATE (CAVALIER)

An electronic "cavalier" showing the name of the person present in a certain seat might be placed either as part of the voting terminal or as a standalone device on top or in front of the desk.

The purpose is to facilitate the identification of the person by the chairperson of the meeting /event.

Alongside with the name, other information might be displayed such as: political group, language, country, position, memberships to bodies etc.

The information to be displayed shall come from different sources: from a central database (seating plan in Codict or voting card inserted) or be entered manually on the fly in an ad-hoc DB.

Identifier	Description
RQ302	Colour display
RQ303	Maximum reading visibility while maintaining a discreet design
RQ304	Allowing up to 3 rows of characters
RQ305	Possibility to display an image e.g. JPG file, or text plus logo (e.g. political group)

Identifier	Description
RQ306	To be installed in the Hemicycle and/or in a Committee meeting room
RQ307	Allow indication of Blue Card and Catch the eye requests
RQ308	Allow indication of the vote expressed
RQ309	No reflection or flicker when filmed, photographed or broadcast

16. FUTURE EVOLUTION

The tenderer is requested to propose on a yearly basis a comprehensive study of the EVS market trends in other Parliaments and similar assemblies as well as of the technological trends that could influence the EVS. The cost of these periodical reports will be included in the maintenance cost and part of the global tender.

The purpose is to give EP a clear overview of the existing situation in other Parliaments, of the market trends and technical developments in the field of the EVSs applied to parliamentary assemblies, and also any other technological trends that could be envisaged to be applied and integrated.

The study will also include proposals for potential future evolution of the EVS in the EP in order to keep up with the latest but robust technological developments. These proposals shall be of real benefit for the EP in general and shall have a real added value for the EVS in particular, shall seek to solve a problem, address an opportunity, enhance the services provided by the EP's electronic vote team and ensure the current EVS evolves towards new functionalities.

The approach proposed by tenderer will be assessed according the following aspects:

Identifier	Description
RQ310	Survey methodology;
RQ311	Allocated resources;
RQ312	Resources qualifications;

Identifier	Description
RQ313	Report structure.

End of document.