

Call for tenders for the design, development, hosting, and maintenance of the SAFEST platform

1. PURPOSE OF THE CALL

This call aims at contracting services for the design, development, hosting, and maintenance of the project's online platform under the project "Improving quality and patient safety in surgical care through standardisation and harmonisation of perioperative care in Europe (SAFEST)", funded by the European Union (Grant Agreement No 101057825). See *the Technical annex for more details on the technical requirements*.

2. TERM OF EXECUTION OF THE CONTRACT

The services object of the call must be provided **from the date of signing the contract until June 2026 including: 1)** a first period, including the development and testing of the platform (and integrated tools) to be used in 10 European hospitals and **2)** extending the platform to 100 EU hospitals and beyond. The contracted services will have different intensities throughout the project life. The first period will require a higher commitment by the contracted services in which most of features and sections of the platform will be developed, whereas the second phase will consist mainly in the maintenance and update of the platform contents and sections. This contract may be extended if the needs of the project so establish and this must be informed to the provider at least 6 months before the end of the contract. The extension will be decided by the contracting authority and will be mandatory for the provider.

3. ECONOMIC OFFER

Those interested should include in their proposal an economic offer detailing the amounts by phases of the project. The amount corresponding to VAT, if applicable, will be indicated separately to the base amount in the offer.

The maximum budgeted amount must not exceed 100,000 euros (VAT not included, if applicable).

4. ELIGIBILITY

The contract is open to any legal entity (including natural persons) or group of legal entities.

4.1 Economic, financial, and technical or professional solvency

Those interested must prove to be in possession of the minimum economic and financial and professional or technical solvency conditions:

4.2 Economic and financial solvency

They must prove the annual turnover referring to the best exercise of the last 5 years, equal to or greater than 100,000 Euros for similar projects. To do this, you will have to present the annual accounts that include the balance sheet and the profit and loss account. The presentation must be accredited before the corresponding official body. In the event of the company has no obligation to present its accounts to an official body, it will have to present a statement on this fact and present the accounts signed by its legal representative.

4.3 Professional or technical solvency

The company will provide the list of the biggest or most relevant contracts carried out during the last 5 years that are of equal or a similar nature to the one that constitutes the object of this contract. The title, dates of completion, object, recipient, and amount of each of the projects will be indicated. The requirement will be that the accumulated annual amount of the greatest year of execution is 70% of the value of the object of this contract.

Applicants must include in their proposals the CVs of the team members involved in this contract.

5. PRESENTATION OF OFFERS, DEADLINES AND MILESTONES FOR THE PROJECT

Proposals -including the technical and economic offer- must be sent to the email address fad@fadq.org with the following reference in the e-mail subject: "SAFEST Platform call application – Name of the company" by **August 3rd, 2022, at 23:59 CET**.

This deadline might be prolonged by the contractor due to exceptional circumstances. If so, all interested parties will be notified as well as a public notice shared in the project website.

All questions shall be submitted by the **29th of July 2022** and shall be exclusively addressed to the email address fad@fadq.org with the following reference in the e-mail subject: "SAFEST Platform call question".

Proposals must be readable, accessible, and printable. Incomplete proposals may be considered inadmissible if essential elements are missing.

Key dates:

Presentation of offers:

- Published: **6th of July 2022**
- Presentation of bids deadline: **3rd of August 2022**

Selection process:

- 1 month – between **3rd of August 2022 and 1st of September 2022**

Award:

- Publication date: **2nd of September 2022**

Timeframe of execution:

- Signature of contract between **2nd of September 2022 and 19th of September 2022**
- Execution up to **June 2026**

Key deadlines for the execution of the project:

- Mock-up and initial proposal of structure of SAFEST platform by the **end of January 2023**
- Beta-version of the Platform by the **end of April 2023**
- SAFEST evidence-based standardized practices by the **end of April 2023**
- Self-evaluation tool for hospitals finalized by the **end of April 2023**
- Forum by the **end of April 2023**
- Data collection dashboard by the **end of May 2023**
- Benchmarking analysis and monitoring by the **end of May 2023**
- Action plans and toolbox by the **end of July 2023**
- Other potential features by the **end of September 2023**
- Self-evaluation tool for patients (Web + Mobile App) by the **end of February 2024**

- Final version of the complete version of the platform **by the end of February 2024**
- Version refined and extended to 100 hospitals **by March 2025**
- Maintenance and documents and content update from **January 2024 to the end of May 2026**

6. TECHNICAL NEEDS

Although the final technical requirements will be agreed upon with the contractor based on its proposal, the basic needs are set out in the annex to this document.

7. EVALUATION CRITERIA OF THE OFFERS

7.a Criteria based on a value judgment on technical proposal (The maximum score will be 75 points)

Section <i>(See technical annex for further specification)</i>	Scoring of technical proposal
GENERAL	10 points
Data security system	5 points
SAFEST evidence-based standardized practices	5 points
Self-evaluation tool for hospitals	5 points
Self-evaluation tool for patients (Web + Mobile App)	5 points
Action plans and toolbox	5 points
Data collection dashboard	10 points
Benchmarking analysis	11 points
Forum	4 points
Application programming interface	9 points
Innovations	6 points

7.b Criteria based on a value judgment on experience (The maximum score will be 10 points)

Section	Scoring
Experience in developing similar platforms	Briefly describe 3 similar projects to the object of this call. Further references could be demanded if needed 6 points
Suitability of the professional team (includes English language level)	Describe in the CV. Further documentation (such as certificates) could be demanded if needed 4 points

7.c Automatic evaluable criteria (The maximum score will be 15 points)

Economic offer:

The maximum score will be applied to the offer with the lowest price that has not been declared disproportionate or abnormal (a reduction of more than 15% under the maximum budget). The rest of the offers will be valued proportionally applying the following formula

$$\text{ECONOMIC OFFER SCORE} = \frac{\text{cheapest offer} \times \text{maximum score}}{\text{Economic offer provided}}$$

The valuation of the economic offer will be made taking as a reference the amount offered by the company, VAT not included.

8. CONTRACT AWARDING

The offers will be valued according to the award criteria established in the previous sections. All candidates will be informed on the outcome of their proposal and results be published on the project website by the **2nd of September 2022**.

9. WORK PROGRAM

The contract will be executed subject to the provisions of the technical specifications and in accordance with the instructions given in its interpretation to the contracting company by the person responsible for the contract.

The contracting company is obliged to comply with the total term of execution of the contract and the partial terms established, where appropriate, in the work program. If the contracting company delays compliance with the total or partial deadlines, for reasons attributable to it, the SAFEST project manager may, given the circumstances of the case, opt for the termination of the contract or the imposition of the penalties, in the form and conditions established in the contract.

If the delay regarding the fulfilment of the terms was caused by reasons not attributable to the contracting company and the latter offers to comply if the initial period of execution is extended, a term will be granted, at least equal to the time lost, unless the contractor asks for a shorter one.

In case of defective fulfilment of the provision object of the contract or non-fulfilment of the commitments assumed by the contractor company, the imposition of penalties of 3% of the amount of the contract or, where appropriate, the extension, VAT excluded.

The amounts of the penalties that are imposed will be made effective by deducting the amounts that, as a total or partial payment, must be paid to the contracting company.

Each of the phases of the project must be scheduled according to the requirements agreed at the beginning of the project with the contracting company, which may be reviewed, if necessary, throughout the first phase.

The contracting company is responsible for the technical quality of the work it carries out and for the services provided, as well as the consequences that may be deduced for the SAFEST project or for third parties of omissions, errors, methods inadequate or incorrect conclusions in the performance of the contract.

The tenderer must respond to the contractor company to any incident of query reporting if needed the action plan to be implemented within a maximum period of 48 working hours.

10. BILLING CONDITIONS

The form of payment of the contracted service is established by the presentation of the corresponding invoices after the completion of each of the phases and a breakdown of each of the concepts will be detailed, in addition to providing any other documentation, required by the contracting entity.

Phases for payment:

February 2023 - First payment upon delivery of the Mock-up and initial proposal of structure of SAFEST platform by the end of January 2023

- Allow for feedback and introduction of improvements and refinements between the 1st and 3rd of February 2023.

March 2024 - Second payment upon delivery of the Final version of the complete version of the platform by the end of February 2024

- Beta-version of the Platform by the **end of April 2023**
- SAFEST evidence-based standardized practices by the **end of April 2023**
- Self-evaluation tool for hospitals finalized by the **end of April 2023**
- Forum by the **end of April 2023**
- Data collection dashboard by the **end of May 2023**
- Benchmarking analysis and monitoring by **the end of May 2023**
- Action plans and toolbox by the **end of July 2023**
- Other potential features by the **end of September 2023**
- Self-evaluation tool for patients (Web + Mobile App) by the **end of February 2024**

June 2026 – Third payment upon delivery of the extension to 100 hospitals by the end of March 2025 and the maintenance of the platform until the end of project (end of May 2026)

- Version extended to 100 hospitals **by the end of March 2025**
- Maintenance and documents and content update from **January 2024 to the end of May 2026**

11. PAYMENT SYSTEM

The invoices will be paid within a maximum period of 1 month from the date of receipt of the bills, once they are approved by the person in charge of the project, who will ensure that the corresponding work has been completed and with sufficient quality in accordance with what was agreed.

12. OWNERSHIP OF THE WORK CARRIED OUT

The platform and all its components and derivatives remain property of the SAFEST consortium. Source code required for the development of the platform remains the IP of the IT company, but the consortium will have access to the programming code and tools that allow to update and amend the platform independently of the IT provider in future project phases. Upon completion of the work, the IT company will make available all functionality and/or programming tools that allow the SAFEST consortium to do so.

13. SECURITY AND CONFIDENTIALITY OF INFORMATION

The contractor company is obliged to comply with all that is established in the Spanish Organic Law 15/1999, of December 13, on the protection of personal data and the development regulations, in relation to the personal data to which it has access on the occasion of the

contract; as established in Regulation (EU) 2016/679, of the European Parliament and of the Council, of April 27, 2016, regarding the protection of natural persons with regard to the processing of personal data and the free movement of these data and by which Directive 95/46 / EC is repealed.

The documentation and information derived from the one accessed during the performance of the services covered by this contract, and which corresponds to the SAFEST project is confidential and may not be reproduced in whole or in part by any means or support. Therefore, neither computer processing nor editing, nor transmission to third parties may be done outside the strict scope of direct contract execution.

14. ETHICAL CLAUSE

The activities must be carried out in compliance with: (a) ethical principles (including the highest standards of research integrity) and (b) applicable international, EU and national law.

The contracting company is obliged in the execution of the contract to comply with the applicable obligations in environmental, social, or labour established by European Union law, national law, collective agreements, or the provisions of international environmental, social and labour law.

15. CONFLICT OF INTERESTS

The participants must take all measures to prevent any situation where the impartial and objective task is compromised for reasons involving economic interest, political or national affinity, family or emotional ties or any other shared interest ('conflict of interests').

They must inform the contractor without delay of any situation constituting or likely to lead to a conflict of interests and immediately take all the necessary steps to rectify this situation. The contractor may verify that the measures taken are appropriate and may require additional measures to be taken by a specified deadline.

16. RESPONSIBLE FOR THE CONTRACT AND CONTACT INFORMATION

The responsible for the contract will be the Beneficiary Coordinator FUNDACION AVEDIS DONABEDIAN PARA LA MEJORA DE LA CALIDAD (FAD) on behalf of the Consortium for the project: "Improving quality and patient safety in surgical care through standardisation and harmonisation of perioperative care in Europe" (SAFEST). This project has received funding from the European Union - Horizon Europe Framework Programme under grant agreement No 101057825.

For more information or in case of questions, please contact:

Carola Orrego PhD

Tel: +34 93 2076608

e-mail: fad@fadq.org *Please state in the subject of the email: SAFEST Platform call question.*

Technical Annex

SAFEST project overview

SAFEST is a multimethod, interdisciplinary project financed by the Horizon Europe Framework Programme. It will contribute to improve perioperative patient safety/care throughout the development of evidence-based standardized practices in perioperative care and its implementation in 10 hospitals across 5 EU countries.

Evidence-based standardised practices to improve perioperative safety care are defined as: a list of *structural and process practices to promote patient safety and prevent the occurrence of adverse events and complications to be implemented throughout the continuum of perioperative care*. These practices are based on the highest level of available evidence, and there is also broad support on their influence on patient safety outcomes.

After the development of the first version of the SAFEST standardized practices (SSP) and its implementation in 10 hospitals across EU and beyond, we will define priorities and action plans for the implementation of these standardized practices and we will determine contextual factors (at macro-, meso- and micro-levels) that inhibit or promote the adoption of the practices to develop recommendations and lessons learnt to reduce knowledge-practice gaps.

After 18 months of improvement efforts through a Perioperative Quality Improvement Learning Collaborative (PQILC) and the support of a range European stakeholders, the 10 participating hospitals will repeat the evaluation process on the first version.

Ultimately, SAFEST project aims to improve the adherence to evidence-based standardised patient safety practices in perioperative care by 15% and reduce the frequency of surgical complications by 8% after 18 months of a multicomponent intervention.

The idea is to create an interactive platform that will be of use throughout the different phases of the project and beyond the project and that will be accessible for different types of stakeholders (researchers, health professionals, hospitals, project's partners and to patients as well). Patients should be able to access to specific sections of the platform through a website link and a mobile app, this app will be useful to collect patients self-reported outcomes during the post-operative phase (after hospital discharge).

Therefore, the platform will feature different sections including several tools and other end products adapted to the needs of expected end users (hospitals, health care professionals, patients).

Sections of the platform

1) SAFEST evidence-based standardized practices

The main objective of this section is to provide access to the list of the evidence-based standardized practices developed by the SAFEST project and related relevant information/documentation. This section will include the following tools/materials:

- First version of perioperative standardized practices. After the recruitment of multidisciplinary expert groups, 2 round Delphi and a consensus workshop, we will

obtain a first list of perioperative standardized practices. The list will be available to healthcare providers and hospitals in the platform. There will be a wide number of SSP (around 100) divided in 7-10 areas.

This version will be evaluated pre and post interventions by a sample of 10 hospitals.

- Final version of the SAFEST standardized practices. After the 10 participating hospitals conduct the pre and post self-evaluation of the first version of the SSP, and after analysing the contextual factors and define priorities and action plans, we will produce a final version of the SAFEST standardized practices. The final list will be available to healthcare providers and hospitals in the platform to be evaluated in a higher number of hospitals (around 100) from Europe and beyond.
- Additional methodological material to explain the process/methods followed to identify and select the SAFEST standardize practices interpret the list of standardized practices and the process followed to select them.

2) Self-evaluation tool for hospitals

The main objective of this section is to provide relevant information and documents in assisting healthcare professionals to assess to what extent the SAFEST evidence-based standardized practices are implemented at their hospital. This section will be available on the website, and it will include the following tools/materials:

- Hospitals self-evaluation tool (an interactive online checklist/survey). The survey should provide the option to add text content, a scoring system and uploading contents. This tool needs to be updated at the end of the project with the final version of SPP.
- Training material: videos, tutorial, and other educational material to explain the tool domains/sections and how to complete it. It could be composed of videos, PowerPoints presentations and pdfs that need to be uploaded to the platform. Frequently asked questions (FAQs) sub-section
- “Help desk” feature facilitating the communication between the health professionals (users) and the researchers (the developers)

3) Self-evaluation tool for patients (Web + Mobile App)

The main objective of this section is to provide relevant information and documents for collecting patients reported outcomes (PROMs) and patients reported experiences (PREMs). This section will be available on the website but also through a Mobile App and it will include:

- Two self-evaluation tools (online checklist/surveys, one for PROMs and one for PREMs)
- Lay language materials for patients (training material): videos, tutorial, and educational material to explain the tools domains/sections and how to complete them
- Frequently asked questions (FAQs) sub-section
- “Help desk” feature facilitating the option for patients to ask questions to the researchers
- Patients can be also helped by researchers to fill in the surveys (patients with low digital literacy or people with disabilities).

4) Action plans and toolbox

This section has the objective to provide relevant information and documents related to what strategies to follow to adopt the SAFEST evidence-based standardized practices at country level. This section will include:

- Summary of the main priorities and objectives formulated by each of the participating hospitals.

- Linked to the priorities, interactive action plans developed per participating hospitals including a dashboard (that allow defining actions, responsible, calendar and follow-up).
- Toolbox (containing prioritization and implementation documents)

Section 5 and 6 below are the most important elements of the platform. They will allow to collect data and monitor hospitals' evolution. Therefore, the tenderer should take into account that they have a higher scoring in the proposal assessment.

5) Data collection dashboard

This section has the objective to connect and report data at the hospital level with the SAFEST platform. This section will include:

- Patient-level data (demographic data, length of the stay, mortality, complications measured by predefined tools such as [ISOS tool](#))
- Hospital-level data (composite indicator, including measures from the sets of standardized practices)
- Hospital characteristics
- Patient-reported measures (via app and via web)

This is not an exhaustive list but rather it is presented in an illustrative way because there can be more variables and sub variables that are decided at the time.

Users will introduce or upload data at hospital level. **Linkage of data from the hospital information system to the project platform is not intended.**

6) Benchmarking analysis and monitoring

This section will provide a visual overview of the comparison and benchmarking analysis (evaluating mapping) of all participating hospitals, with a particular focus on the EU. This section will provide information at hospital and country level including a report and comparative graphs. Graphs will be built based on the data collected in the previous section and will be provided by the participants hospitals. The data and quality of the data to produce these graphs are under the responsibility of the contractor.

The type of graphs should include funnel plots, [statistic control process charts](#) (p-np graphs, u-graphs-r and x-s charts) and spider charts as the minimum requirements. Other proposals by the tenderers are welcome.

The graphs should also have the option of follow up with time series (weekly, monthly, or yearly)

7) Forum

This section will provide a forum to support health professionals to connect and discuss ideas around the safety standards. Features may include a discussion board and opportunity to upload documents or links to other online resources. Further, there needs to be an option to limit access to specific groups to specific parts of the forum.

8) Other potential features:

In addition to the above-mentioned tools, the SAFEST platform will also include other key results of the project:

- Core Outcome Sets: We will have a list of selected outcomes, and each outcome should include a definition and then also allow to navigate on the different sections of the platform that include the selected outcome/s.

Please note:

More information on the project's definitions/Glossary of terms can be found [HERE](#)

Safest platform technical requirements

This document presents the technical requirements of each of the main sections of the SAFEST platform. For each section we specify the requirements to both **front-end and back-end**. As a general principle, elements that allow autonomy of the SAFEST consortium (contractor from now on) from the back-end functionalities will be valued positively.

All elements described here are MINIMUM REQUIREMENTS, except for those elements included under “Potential innovations”. Please notice that you can propose additional innovations to add value the proposal.

Section	TECHNICAL REQUIREMENTS
GENERAL	<p>The following requirements include general principles for the platform that should be considered in all sections of the platform.</p> <ul style="list-style-type: none">• The SAFEST project is ongoing, started in June 2022 and will finish in 2026. In this document we include a description of the foreseen technical requirements.• We foresee potential changes in some of the elements so proposals that are flexible and allow for future modifications will be evaluated positively.• After the end of this contract (June 2026) the platform will be updated as needed, therefore the general design should allow the SAFEST consortium members to add information (documents, enter data, etc.) in the future.• Platform Inclusiveness: The online platform is fully adapted for people with visual and hearing (production of subtitles on video products) impairments• All proposals need to consider that in the SAFEST platform navigation should be envisioned based on:<ul style="list-style-type: none">⊂ The type of end-user (Patient; Healthcare professionals and Researchers).• The platform must be multilingual, allowing for at least 6 languages. In case of translation, the bidding company would be responsible for translating menus and navigating instructions. The contractor would provide translated materials. It is expected that only specific sections of the web will be translated to several languages, such as the self-evaluation tool for health professionals and the self-evaluation tool for patients. The bidding company can suggest automatization features such as translating plug-ins, which will be highly valued.• The platform should be prepared for data sharing, including the downloading of databases in at least formats of excel and csv files. Proposals that allow for users to select the specific variables that they want to download will be evaluated positively.• Proposals that include web accessibility requirements, particularly facilitating navigation of people with visual impairments, will be evaluated positively. All proposals should include a least option to enlarge font size.• Links to external resources should open in a new navigation tab.• Some sections of the platform might be presented as protected site; therefore, the design of the platform should allow for the possibility of requiring registration and/or installing a paywall. The back office of all platform sections should allow admin users to identify if the material

	<p>should be publicly accessible, under registration or under payment.</p> <ul style="list-style-type: none"> ● The general visual design (colours, etc) of the platform should follow the design of the project website (currently under construction) ● The platform should be able to include a variety of formats such as: pdf, excels, videos, podcast, eBooks. ● The platform should have the option to host a considerable amount of information in the form of documents, etc. <ul style="list-style-type: none"> ⊘ Back-office specifications (or specification of admin functionalities). Administrators should be able to: <ul style="list-style-type: none"> ⊘ Upload documents (preferably multiple documents at once). ⊘ Tag documents (preferably allowing for tagging at the moment of upload, assigning tag(s) to multiple documents at once). ⊘ Select if links to other platform section should appear for each specific document (preferably allowing for assigning relevant sections at the moment of upload and assigning section(s) to multiple documents at once). ⊘ Adding users and hospitals ⊘ Managing users' role and permissions ⊘ Selecting right graphs depending on the type of measures/indicators ● The platform collects sensitive information from patients and healthcare organisations. Data security should be guaranteed with the highest levels according to the EU requirements, regarding Data storing, data protection, compliance with GDPR, etc.
<p>SAFEST evidence-based standardized practices</p>	<ul style="list-style-type: none"> ● The general appearance of this section should be a list of practices that should be organized and searchable per different phases (pre-operative outside hospital, pre-operative in hospital, intra-operative in hospital, post-operative in hospital, post-operative outside in hospital) and area (for example, medicine administration) ● They should be available for each of the six languages linked to the self-evaluation section ● The list should allow for: <ul style="list-style-type: none"> ⊘ Interactive ordering of the list ⊘ Filters: hospital, area or category of the safety practices, keywords, type of professionals, services or units. ⊘ Users should be able to download the complete list of standardized practices but also select and download specific practices according to the phases and/or areas of interest. ● This section should also have a subsection including training material such as pdfs, word, excel files, images, videos, and links to external websites. ● There should be an option to tag documents to facilitate identification (e.g., phase of perioperative care, target stakeholder) ● The documents should be searchable through the search engine (at least in title and other variables in database and via tags). The option to search the text of the documents and articles pdfs will be valued positively. ● The user will see linked to each document related areas or products of the SAFEST platform that might be of interest (those would be provided in the moment of uploading each document).
<p>Self-evaluation tool for hospitals</p>	<ul style="list-style-type: none"> ● This section would include basic info on the self-evaluation tool ● The self-evaluation tool should be an interactive format like an online checklist/survey allowing users to:

	<ul style="list-style-type: none"> ∅ Provide answers for Likert-scale ∅ Insert free text ∅ Upload images/documents ∅ Additional information and guidelines to implement the practices (as help buttons, pop-ups or similar) ∅ Export data to different formats ∅ Include a report of score tracking <ul style="list-style-type: none"> ● This section should also have the following subsections/features <ul style="list-style-type: none"> ∅ A subsection training material such as pdfs, word, excel files, images, videos, and links to external websites to explain the tool domains/sections and how to complete it ∅ A potential integration with the Moodle platform for e-learning environment could be required (this platform would be prepared by the contractor) ∅ A subsection for Frequently asked questions (FAQs) subsection ∅ A “Help desk” feature facilitating the communication between the health professionals (users) and the researchers (the developers)
<p>Self-evaluation tool for patients (Web + Mobile App)</p>	<ul style="list-style-type: none"> ● This section would include basic info on the self-evaluation tools (one for PROMs and one for PREMs) ● The self-evaluation tools should be an interactive format like an online checklist/survey allowing users to: <ul style="list-style-type: none"> ∅ Provide answers for Likert-scale ∅ Insert free text ∅ Upload images/documents ● This section should also have the following subsections/features <ul style="list-style-type: none"> ∅ A subsection for lay language training material such as pdfs, word, excel files, images, videos, and links to external websites to explain the tool domains/sections and how to complete it ∅ A subsection for Frequently asked questions (FAQs) subsection ● A “Help desk” feature facilitating the communication between the health professionals (users) and the researchers (the developers) ● An App should be linked to this section with the same content information ● Ability to export and print as Word, HTML and PDF. Possibility for patients to printed. ● Ability to display in different devices (e.g., PC, tablet, and phone). ● As described in the general section, data security should be emphasized here. An authentication of users should be addressed. To be agree with the contractor.
<p>Action plans and toolbox</p>	<ul style="list-style-type: none"> ● This section has the objective to provide relevant information and documents related to what strategies to follow to adopt the SAFEST evidence-based standardized practices at country level. This section will include: <ul style="list-style-type: none"> ○ Summary of the main priorities and objectives identified in the participating hospitals ○ Action plans linked to the priorities and objectives developed per participating implementation hospitals

	<p>including a dashboard allowing defining activities to be carried out, those responsible , calendar and follow-up.</p> <ul style="list-style-type: none"> ○ Toolbox (prioritization and implementation documents) <ul style="list-style-type: none"> ● A connection between the self-evaluation tool and action plans is required (The areas with lower score in the self-evaluation tool, should be prioritised in this section)
<p>Data collection dashboard</p>	<ul style="list-style-type: none"> ● This section has the objective to connect and report data at the hospital level with the SAFEST platform. This section will include: <ul style="list-style-type: none"> ☞ Patient-level data (mortality, complications) ☞ Hospital-level data (composite indicator, including measures from the sets of standardized practices, costing and economic modelling) ● Main stakeholders of interest <ul style="list-style-type: none"> ☞ Clinicians ☞ Patients ● Back-office specifications (or specification of admin functionalities) <ul style="list-style-type: none"> ☞ Admin users should be able to edit online ☞ Each hospital should be able to login into their section ☞ Data should be verified when entered. The platform should verify data entering and not allow to enter unreasonable data for example, a patient of 160 years old. ☞ The platform should allow filtering data based on specific data such as date of birth, weight, height etc. All this data will be provided by the hospitals with the support of the SAFEST consortium <p>Back-office specifications: admin can update the contents of the introduced data. Some data can be uploaded as a database with a previous agreement with the tenderer (format, structure, etc.)</p>
<p>Benchmarking analysis</p>	<ul style="list-style-type: none"> ● Statistical Data Processing Capacity ● Based on the data reported in the previous section, the software platform has technical capacity for data processing (report) that enables receiving and processing data about the above reported outcomes and selected indicators at hospital and patient level. Processed statistical data (protection of personal data is ensured) is used for program evaluation purposes. ● The software should allow the creation of different graphs including funnel plots, statistic control process charts (as p-np graphs, u-graphs-r and x-s charts) and spider charts as the minimum requirements. ● The graphs should also have the option of follow up with time series (monthly, or yearly). ● This section will provide a visual overview of the comparison and benchmarking analysis (evaluating mapping) of all participating hospitals, with a particular focus on the EU. This section will provide information at county level including a report and comparative graphs. ● This section should allow the user to select from different

	<p>prespecified scenarios and perspectives to view the results of the benchmarking analysis.</p> <ul style="list-style-type: none"> • The results of the benchmarking analysis will be stored in a database. By selecting different settings for several parameters, data from the database will be shown in tables and visualized in graphs. • Statistic Control process measures and graphs should be integrated
Forum	<ul style="list-style-type: none"> • This section will provide a discussion forum to be used by health professionals • This section could integrate social networking option such as for example Drupal where the user could: <ul style="list-style-type: none"> - Register as a user - Create a forum by topic (users and administrators can create new topics) - Users can “like” other users’ comments - Comments can be tagged (user can create tags) - Specific forum topics can be limited to a group of users <p>Back-office specifications (or specification of admin functionalities) Admin can merge and edit existing tags, censor some comments (following rules of the network) see list of users and download lists of registered users.</p>
Application programming interface	<ul style="list-style-type: none"> - The platform should offer an application programming interface to facilitate the exchange of data with other applications and use cases.
Innovations	Innovations, from those suggested in each section plus those additionally proposed by the IT company.

Glossary of terms

The following terms have been prepared to describe some key terms in an easy way. Not necessarily corresponds to the formal definition.

- **Perioperative care:** is the practice of patient-centred, multidisciplinary, and integrated medical care of patients spanning from care provided before hospital admission to postoperative recovery at home or in a specialised rehabilitation facility (e.g., pain management strategies).
- **Evidence-based standardised practices (SPP)** to improve perioperative safety care are defined as: *structural and process practices to promote patient safety and prevent the occurrence of adverse events and complications to be implemented throughout the continuum of perioperative care*. These practices are based on the highest level of available evidence, and there is also broad support on their influence on patient safety outcomes.
- **Tools:** in this context tools are referred to surveys and questionnaire that health professionals use to report to what extent they have adhered to the SPP and patients to report regarding their improvement or worsening in a specific outcome, for example a questionnaire on quality of life, a questionnaire on patient satisfaction with care etc.
- **Self-evaluation:** Self-evaluation is the process of systematically observing, analysing and reporting one's own actions or results. Self-evaluation takes place at an individual level, but also at a department or organizational level.