



Context

According to the provisions of its Department of Excellence project "2023-2027" - robotic/AI platform - CUP B33C22002010001, the Department of Odontostomatological and Maternal and Child Surgical Sciences (DISCOMI) intends to improve the quality of the main general and specialized surgical procedures pertaining to it (such as, for example, gastrectomies, liver resections, colon operations, prostatectomies/nephrectomies, pancreatectomies, pediatric surgery and using advanced *data science* and artificial intelligence (AI) methodologies for the automated analysis of surgical videos. In this perspective, it aims to develop an *integrated pipeline* for the secure management of video data, including automatic de-identification, image segmentation and subsequent annotation (also using validated *tools* for *video-based* Surgical Quality Assessment).

The project activities will then involve the use of managed data to train and validate AI models capable of automatically recognizing operating phases, critical anatomical structures and evaluating the quality of surgical procedures. The results obtained will be used for the improvement of surgical training and the optimization of clinical practices.

1. Subject-matter of the contract

The object of the contract consists in the "*provision of a license (creation of accounts for use) to a software for the storage, management and analysis of surgical videos for the Department of Surgical, Odontostomatological and Maternal-Child Sciences*", requested as part of the "Department of Excellence 2023-2027 project" - robotics/AI platform - CUP B33C22002010001.

The contract consists of a single lot and includes, more specifically, the following services:

- a) the provision of software licenses for the management of video data, functional to the collection and annotation of videos of surgical interventions with the creation of a high-quality pseudo-anonymized dataset;
- b) a package of support services for the installation, management and use of applications for the anonymization of surgical videos.

The services covered by this contract will be managed on the basis of the methodology and work plan envisaged for the Department of Excellence "2023-2027" project and will concern a first part of the activity, consisting of the creation of the video data management platform and the collection and annotation of video data. In particular, the planned activities will be carried out in line with the pre-established work plan, composed as follows:

- Video Data Management Platform Building Tasks:
 - ✓ purchase of automatic anonymization and segmentation tools (e.g. software for video de-identification);
 - ✓ preparation of protocols for the collection, de-identification and secure storage of video data;
 - ✓ design and structuring on the REDCap (*Research Electronic Data Capture*) platform, in use by the Department, of the associated clinical data collection and specific study agreement between the Integrated University Hospital of Verona (AOUI) and DISCOMI for data management;
 - ✓ submission to the Ethics Committee (EC) of the study protocols for each pathology;
 - ✓ carrying out preliminary *workflow* tests and validation of data de-identification;
 - ✓ collection and annotation of video data;
- Video data collection and annotation tasks:
 - ✓ collection and de-identification of surgical videos from general and specialist surgery procedures;
 - ✓ temporal and spatial annotation of the surgical phases through the use of *video-based assessment tools* (if available for specific pathology);
 - ✓ creation of high-quality video-annotated datasets for training AI models.



The required software/software licenses to be used for the above project activities must comply with the regulations on EU Regulation 2016/679 called "European Regulation on the protection of personal data" (GDPR).

The above-mentioned activities, which are part of a more advanced phase of the Department of Excellence project "2023-2027", such as the training of AI models for the automatic assessment of surgical quality and validation of AI models, are not included among the services required under this contract.

2. Estimated amount of the contract

The maximum estimated amount of the contract in question amounts to **Euro 60,000.00 excluding VAT** (interference safety costs equal to Euro 0.00).

The offer for the set of services requested pursuant to art. 1 must be formulated for an amount equal to or lower than the maximum estimated amount. Therefore, bids of a higher amount will not be admitted.

Any economic operators invited to submit their bid must expressly indicate the labour costs and company charges relating to the fulfilment of the provisions on health and safety in the workplace only if required, in accordance with the provisions of art. 108, paragraph 9, of Legislative Decree no. 36/2023.

3. Duration and place of performance of the services covered by the contract

The supply and activation of the required software/software licenses will be carried out within 30 days from the date of sending the order form/signing of the contract.

The required activities will be carried out according to the methodology and work plan envisaged as part of the Department of Excellence "2023-2027" - robotic/AI platform project. The presumed start of the project activities is scheduled for September/October 2026.

The support activity for the collection and management of surgical videos will take place at the Department of Surgical Sciences/Integrated University Hospital of Verona (AOUI) and any collaborating centers identified below, such as Surgical Centers or Departments of public/private universities located in the EU and outside the EU, involved on the basis of research collaboration agreements previously activated by the Department and/or data sharing agreements (DSA) defined subject to the approval of the Ethics Committee.

4. Additional terms and conditions of the contract

- These specifications describe the minimum requirements required for the service subject to the contract, according to the envisaged design requirements. Any improvements proposed in the context of the bid submitted, including an illustrative description of the supply/service, may be evaluated at the discretion of the Contracting Authority for the purpose of identifying the contracting economic operator.
- The contractor must ensure the traceability of financial flows, in accordance with the obligations set out in Law no. 136 of 13 August 2010, as amended.
- The services included in this contract will be subject to conformity verification, aimed at ascertaining the effective and positive implementation of the activities carried out, in compliance with what was agreed between the parties at the time of signing the contract.
- The payment times will be agreed in advance between the parties. Payments will be made following receipt of a regular invoice, subject to verification of the progress of the activity.