

Term	Meaning
GIS	Geographic Information System
EMS	Emergency Medical Services
MH	Ministry for Health
ETC	Expert technical characteristics
BOIS	Back-End Information System
IS	Information solution
ENCRS	Emergency Notification Centre of the Republic of Slovenia
RENC	Regional Emergency Notification Centre
OCC	Police Operations and Communication Centre
VPN	Virtual Private Network
IP	Internet Protocol
p/pc	Patient/person in care
EDV	Emergency doctor's vehicle
DMR	Digital mobile radio
AED	Automated external defibrillator
MW	Motorway
ZZZS	Health Insurance Institute of the Republic of Slovenia
CPR	Cardiopulmonary resuscitation

Table 1: List of terms and abbreviations

1. PUBLIC CONTRACT – APPLICATIONAL PART

1.1 OBJECT

The object of the public contract is also the production and implementation of an information system for the work of a healthcare dispatch unit services.

1.2 DESCRIPTION

The program provides comprehensive information support to the healthcare dispatching process. It consists of multiple inter-linked modules enabling the reception of an emergency and non-emergency call, a GIS intervention display, a GIS team location display, team control, a connection with a telephone and a radio system, and enabling a prompt activation of teams, e-ordering of transportation, and the exchange of information with between various databases. Furthermore, the program contains a quality control module which enables statistical data processing from various perspectives.

1.3 OBJECTIVES

The objectives of the public contract are:

- Prompt and high-quality reception of calls in the healthcare dispatch unit service by using the Slovenian Emergency Medical Service Index
- Optimum disposal of available resources,
- A comprehensive overview of the EMS resource situation and emergency transports in accordance with the Rules on Emergency Medical Service, the Rules on the Carriage of Patients, and the applicable guidelines of the MH,
- Optimisation of access times and logistic processes,
- Reducing the communications burdens of dispatchers,
- Integration with existing databases with the goal of providing quality and reducing errors as dispatcher make decisions

1.4 SCOPE

The following will be carried out within the public contract:

- **Development and installation**

Development and installation of the dispatch unit service computer program according to the functional turnkey principle. The application will support all technical requirements given in chapter 1.5 Technical requirements and the functionalities described in chapter 2. The functionality of the offered software. The application must be established in the production environment of the dispatch centre.

All of the ICT equipment must be supplied in a comprehensive manner according to the functional turnkey principle. If multiple tenderers offer a solution, all tenderers have joint

liability for each of the required functionalities, regardless of how the work is divided among them. All software and hardware must be compatible regardless of whether this is expressly required in the ETC or not and regardless of whether the compatibility standard is laid down in these ETC or not. During the selection phase, a tenderer must allow the contracting authority to see the currently operating solution of the tenderer in the production environment.

- **Deployment and training**
 - 10 one-day workshops for healthcare workers, key users of the solution, utilising the “Train the Trainer” methodology,
- Providing guarantees and eliminating deficiencies within the guarantee period.

The products that will be implemented through the public contract and for which the tenderer offering the solution is responsible:

- **Management and quality products**
 - project schedule including an activity plan,
 - interim and final reports on the progress of the project and minutes from meetings,
 - tests and reports on the capability, reliability, and security of the system and the applied technology,
- **Content-related and technical products**
 - functional, implementation, and test specification of the solution:
 - a transparent technical description of the solution, including all segments and modules and their functionalities,
 - technical documentation for all elements of the solution, including the instructions for use (the procedure for establishing the solution, configuring its controls, set-up parameters),
 - a documented description of installation procedures, individual operations related to system configuration for all controls, including set-up specifications,
 - a documented detailed description of integration interfaces and integration procedures for the contracting authority’s environment,
 - the specification for the integration of the solution for a dispatch program, including other existing IT solutions for hospital and healthcare IT systems
 - the specification for restore procedures and a recovery plan following a catastrophic error,
 - the specification for a functional and stress test,
 - a documented description of procedures includes log files and other indicators that assist in discovering the source of the problem or the error in the solution’s operation,

- the implementation of the web module for the schedule of available emergency medical teams that will be used by transport providers.
- user instructions (user manual) that will also be accessible in the web application – user assistance,
- the specification of minimum and optimum hardware requirements, depending on the performance of the operating system's architecture.

All of the new software components that the selected contractor will be developing for the contracting authority should contain the source code and executable code of all modules, treatments, and services. The licensed software should contain the executable code of all modules, treatments, and services.

1.5 TECHNICAL REQUIREMENTS

- **Requirements concerning availability and reliability;**
 - 99.5% availability and reliability, namely downtime in the amount of 1.83 days a year or 3.6 hours per month, or 50.4 minutes a week.
- **Requirements concerning capability (responsiveness);**
 - Such responsiveness of the entire system must be provided, so that it does not disturb the thought process of the system user. Therefore, the solution must provide permeability of at least 30 transactions per minute, with an anticipated response time of 2 seconds for 99% of all transactions.
- **Requirements concerning upgradability;**
 - The solution must be designed so that it can be adjusted to the integration with back-end systems without major changes.
- **Requirements concerning scalability;**
 - The solution must be easily extendible to the national level.
 - The solution must be designed so as to enable providers, such as emergency medical centres, emergency transport providers, etc. to gradually implement the solution.
 - As the application of the solution is extended, the occupancy of the hardware and servers may not increase faster than the use of the solution (e.g. in the event of a 10% increase in the monthly number of transactions, a maximum of 10% increase in the system load is expected).
- **Requirements concerning the application of standards and protocols;**
 - The solution must operate in accordance with modern technological standard and protocols. The content-related standards contain a standardised set and format of data for a particular event in the process of treatment.
 - In addition to the content-related standards, infrastructural standards and other recommendations, protocols, and guidelines that the development of information systems in healthcare, electronic commerce, etc. have in common must also be taken into consideration.
- **Requirements concerning the observance of legislation**
 - The offered solution must be in compliance with the acts listed below,

implementing regulations, and rules. The solution must meet the user and functional requirements that arise directly from legislation, even if these requirements are not explicitly defined in this document. If, during implementation, new acts, implementing regulations, and rules are adopted, these must be observed as well.

- Electronic Business and Electronic Signature Act ([ZEPEP-UPB1](#)) Official Gazette of the Republic of Slovenia [Uradni list RS], No [98/2004](#)
- Health Services Act (ZZDej-UPB2), Official Gazette of the Republic of Slovenia [Uradni list RS], No 23/2005 and the Act Amending the Health Services Act (ZZDej-I), Official Gazette Official Gazette of the Republic of Slovenia, No. 23/2008
- Health Care and Health Insurance Act (Official Gazette of the Republic of Slovenia [Uradni list RS], Nos 72/06-UPB3,114/06-ZUTPG,91/07,76/08,62/10-ZUPJS, and 40/11-ZUPJS-A)
- Healthcare Databases Act (ZZPZZ), Official Gazette of the Republic of Slovenia [Uradni list RS], No 65/2000
- Personal Data Protection Act, (ZVOP-1-UPB1), Official Gazette of the Republic of Slovenia [Uradni list RS], No 94/2007
- Patient Rights Act (ZPacP), Official Gazette of the Republic of Slovenia [Uradni list RS], No 15/2008
- Rules on Compulsory Health Insurance (Official Gazette of the Republic of Slovenia [Uradni list RS], No 30/03, with all amendments)
- Rules on forms and documents needed to implement compulsory health insurance, Official Gazette of the Republic of Slovenia [Uradni list RS], No 129/2004, the Rules amending the Rules on forms and documents needed to implement compulsory health insurance, Official Gazette of the Republic of Slovenia [Uradni list RS], Nos 132/2004, 21/2005, 34/2005, 98/2006, 138/2006, 30/2008, 126/2008, 94/2010, and 104/2013
- Instructions for Asserting the Rights to Healthcare Service with a Referral in Compulsory Health Insurance (the ZZZS Instructions, <http://www.zzzs.si/zzzs/info/egradiva.nsf/o/38FF11568D0E77C7C12577FB00426E00?OpenDocument>)
- Guidelines for Protecting Personal Data in the Information Systems of Hospitals (Office of the Information Commissioner of the Republic of Slovenia, https://www.ip-rs.si/fileadmin/user_upload/Pdf/smernice/Smernice_za_zavarovanje_OP_v_IS_bo_lisnic_15022008.pdf)
- Guidelines on the Operation of Emergency Medical Services in the Event of Mass Accidents (http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/kakovost/NMP_2013/mnozicne_nesrece/Smernice_NMP_mnozicne_tisk_2.pdf)
- Medical Guidelines for the Actions of the Emergency Medical Services in the Event of Chemical Accidents (http://www.mz.gov.si/fileadmin/mz.gov.si/pageuploads/krizne_razmere_mnoz_nesrece_epidem/Zdr_smernice_SNMP_kemijske_nesrece_2011.pdf)
- Decree on officiation with users in public health care, Official Gazette of the Republic of Slovenia [Uradni list RS], No 98/2008

- Rules on Carriage of Patients (Official Gazette of the Republic of Slovenia [Uradni list RS], No 107/2009, 31/2010)
- Rules on Emergency Medical Service (Official Gazette of the Republic of Slovenia [Uradni list RS], No 106/2008).
- and other relevant acts and regulations.

1.6 PROJECT SCHEDULE

The launch of the proposed solution will take place on the basis of the contracting authority's priorities.

Table 2 shows the schedule for the launch of the solution. In this table, T0 is the date of the signing of the agreement, and T1 is the date of the transition into production.

Item	Durati on	Sta rt	End
Establishing and implementing the IT solution		T0	T0 + 120 days
1. Phase one (analysis, planning)	45 days	T0	T0 + 45 days
2. Phase two (development of additional required functionalities)	50 days	T0 + 45 day s	T0 + +95 days
3. Phase three (implementation)	10 days	T0 + +95 day s	T0 + +105 days
4. Phase four (training users for the technical and conceptual application of the solution, corrections of the solution)	10 days	T0 + +10 5 day s	T0 + +115 days
5. Phase five (handover protocol on record)	5 days	T0 + +11 5 day s	T0 + +120 days
Guarantee period	12 months	T1	T1 + 12 mont hs

Table 2: Solution implementation schedule