9. System to-be - tender requirements - Requirements catalogue

This part of the documentation is the main catalogue holding the list of requirements as specified for the various part of the system. These requirements are of three main categories:

- Functional requirements - describing the required functional aspects of the system in regard to the processes or agendas the system shall be supporting.
- Non-functional requirements - all other "general" constraints of the system that the system should follow and respect in all it parts.
- Other requirements - dealing rather with the project-based issues, such as requirements for project management, documentation outputs and structure, testing requirements etc. If necessary, the respective parts describing each of the requirements in detail may be found in separate parts of the documentation, or (if not to many), directly within the requirements catalogue.

Note: Functional requirements for shared parts of the systems, that, while being functional ones, however should be valid throughout the entire system are usually parts either of "Architectural requirements" (if concerning management, installation, setup or configuration properties of the system) or "Interfaces requirements" (if concerning typically GUI parts or interfaces concepts valid in all of them such as headers/envelopes etc.).

Please note following important contractual statement: THIS CATALOGUE REPRESENTS THE ONLY AND ENTIRE CONTRACTUALLY BINDING SET OF REQUIREMENTS. THE CONTENT OF PREVIOUS SET OF DIAGRAMS IS CONSIDERED to be rather informative for the contractor in order to gain a faster, better and more comprehensive overview of the ordered system-to-be, yet the diagrams are considered as CONTRACTUALLY BINDING ONLY IN THOSE CASES, WHEN THEY ENUMERATE OR STRUCTURE ANY INFORMATION DIRECTLY OR INDIRECTLY REFERRED FROM WITHIN THE REQUIREMENTS CATALOGUE.

9.1 Requirements catalogue - Functional requirements (FR)

This part of the documentation describes the required functional aspects of the system in regard to the processes or agendas the system shall be supporting.
While one may observe the processes and their order, bindings and logical dependency in the appropriate documentation parts, here the requirements are merely a list of these processes or sub-processes, to ensure their implementation according the abovementioned specification.
Note: This chapter is intended as a preliminary breakdown of the requirements specified further, so this chapter does not intend to replace or support the Functional requirements delivered by the winning contractor within the scope of the project as part of the “Analysis and system design document”.

9.1.1 Functional requirements (FR) - Person enrolment

There are to be several ways how a person (legal subject handling phytosanitary material) can be introduced into the system, where manual input is only one of them.

FR0001	FR0001 Person import - justice register semi-annual export
The system has to allow import data of economic agents from the justice register (who applied for phytosanitary operations there, or, if necessary due to legislation constraints, identified by other type of filter) in any form the semi-annual export is delivered in. In case the data needs any kind of filtering not previously done during the export, based on the data contained in the report, this filtering has to be done.	

FR0002	FR0002 Preview of list from justice register semi-annual export
Before the persons on the list are stored in the phytosanitary register the list of imports from the list data should be previewed.	

FR0003	FR0003 Person load - direct query to justice register
The system has to allow import data of economic agents (who applied for phytosanitary operations there, or, if necessary due to legislation constraints, identified by other type of filter) when loading by querying the API of the justice register of economic agents.	

FR0004	FR0004 Person list preview - direct query to justice register
The phytosanitary register has to enable the search in the justice register (based on such parameters set that corresponds to the set of parameters the API of justice register is exposing) and additionally by date of subject primary registration of phytosanitary business activity, if such parameter is present as input or in the output data. The user has to have the possibility to include/exclude subjects to be enrolled.	

FR0005	FR0005 Person manual input
When the person cannot be obtained by any other automatic enrolment procedure, then the user (with appropriate role) has to have the possibility to enrol the person by manual input.	

FR0006	FR0006 Person enrolment checks
When a person is enrolled by any mean, the system has to provide checks concerning its data provided checking if: • the subject has not already been enrolled in the system under different data attributes (if the subject is being enrolled manually, than this check has to be done latest before its storage in the system) • the subject does not have different attributes in the central register	

9.1.2 Functional requirements (FR) - Person list and search

After a person (legal subject) is introduced into the system, there are several data sub-entities bound to the person that have to be editable.

FR0007	FR0007 Person search
The persons stored in the phytosanitary register have to be searchable and details displayable by selecting the required person from the resulting list.	

FR0008	FR0008 Person edit
The person data has to be editable by user with appropriate role. If the data is being refreshed automatically from justice register than the attribute has to be securable against further automatic refresh, optionally specifying the expiration timeout of the blockage for each attribute. When being saved, the person enrolment checks have to apply as well. Specific sub-screens/elements should be present for editing: • Person metadata (name, address...) • IDs (business ID and other) • Contacts (people names and contacts responsible for various roles) • Offices (addresses of offices of the legal person) • Production sites (addresses of production sites) • Documents (files added to the specific person) • Activities (list of phytosanitary activities the person is doing) • List of plant passport series assigned to the person • List of plant passports / passport series issued by/to the person Person may be deleted/suspended.	

9.1.3 Functional requirements (FR) - Plant passports list and search

Passports are a specific data entity, since while they are bound to a specific person they have been assigned to, they should be still accessible as a stand-alone entity too, since:

- They might be searchable by authorized public subjects
- They might be (in later stages of the project) accessible and editable by the assignees themselves based on the series of the passports only (if the infrastructure allows such type of access also in the terms of enrolled authentication subjects)

FR0009	FR0009 Passport list
Thy system should provide a list for search and select for editing/creating of plant passports issued for batches of phytosanitary material (to a specific person). (Note that this list might be the entry point for public users as well).	

FR0010	FR0010 Passport detail display
Selected plant passport from list may be displayed. (Note that this list might be the entry point for public users as well).	

FR0011	FR0011 Passport edit
The users of the system (the NFA) shall be able to introduce the plant passports issued for batches of phytosanitary material into the system (as series). The users of the system (the NFA) shall be able to introduce the plant passport series reserved for given registered subject into the system (as series of plant passports). The plant passport (series) may be edited, deleted or discarded.	

FR0012	FR0012 Passport print
The formal representation of the plant passport may be printed in specified form.	

9.1.4 Functional requirements (FR) - Global functions

Certain functions of the register are to be expected to have influence on the entire system, while still not being general non-functional requirements. These are listed in this section.

FR0013	FR0013 Addresses register
When any attribute is a geographical address, this should be input using a selector from an internal addresses register. The editing (adding new address records or changing it attributes, as well deleting) of the addresses register has to made possible.	

FR0014	FR0014 Administration
The system shall have a GUI part (or use standard platform tools of the underlying framework) accessible for administrators of the system only, used to maintain: • the integrity and cleanness of the records • editing of enumerations and other registry lists • editing of the register of addresses • editing of AAA settings (roles (=SSO groups) assignment to their rights (=functions within the system); roles creation and user account assignments into roles if the access to the respective users permit)	

FR0015	FR0015 Access to the system
The system should provide all its functionality by means of automated accessibility (API). Some of them may be accessible publicly (for authorized subjects only).	

FR0016	FR0016 Automatic subject data update
When a subject has been enrolled in the system than the central register should be regularly queried to check, if those user data, that have been introduced into the phytosanitary register, did not change. An attempt should be made for	

manually introduced persons to associate them with their records in the justice register (e.g. recording any kind of correlation ID from the justice register into the data of the phytosanitary register).

FR0017	FR0017 Data entities in functions
The terms in the various functional requirements and function descriptions refer to the data entities as specified in the "Data drafts (logical classes)" diagrams. Nevertheless it is up to the contractor to re-specify and refine this specification as necessary.	

9.2 Requirements catalogue - Non-functional requirements

This part of the documentation specifies all other "general" constraints of the system, that the system should follow and respect in all it parts.

9.2.1 Non-functional requirements - Architecture (AR)

These requirements specify those needs that are somehow limiting or specifically asking for a concrete design of the modules and their interconnections of the system at various levels of its architecture (SW, HW and even orgware if necessary).
Detailed concepts of the architecture may be specified in separate diagrams in the appropriate parts of the documentation if necessary.

AR001	AR001 Implementation platform
Due to the administrative, sustainability and organization-technological requirements of the final beneficiary, it is required, that the system is implemented **within the SitiAGRI platform** (a system by ABACO Group) by the means of the system: • either within the definition of datasets, client webservices, commands, forms and their association to model etc. (by means such as for example SITI Service Manager / DOSSIERs) or • on the top of the basic platform (and with usage of the shared resources/functions of SitiAGRI) formed by JEE Web containers (on Tomcat (preferred)/Jboss/Oracle AS/WebSphere/BEALogic) above Oracle 10g/11g (+Spatial extension) DB NOTE: In case it shows necessary, the contractor has to take part on platform training courses as needed, and has to cover the costs within the fixed price for the delivery, if not agreed otherwise.	

AR002	AR002 Provided interface
All the WS functions specified in this document and/or specified later by the detailed analysis done by the contractor have to be made publicly available, if presented as part of the public WS and when possible by the framework of the underlying system.	

AR003	AR003 Operation environment architecture
The system should be set up according to given requirements and conditions as specified during analysis, respecting the deployment diagrams in this document (where the analysis requests should prevail), and, if possible, that in at least 2 environments: • testing environment (does not meet response-time requirements as specified, with exception of those moments, when such acceptance tests are to be performed, that are measuring the performance) • production environment (that has to meet response time as specified in appropriate requirement) During the development of the system, the environments shall be regarded as follows: From beginning of the project up to M2 • the testing environment: won't exist • the production environment: will be called "M2 testing environment" and is to be used by the contracting authorities for testing purposes – the acceptance tests will be based on the performance and behaviour of the application being tested on this environment. Up to M2 (or any other moment, when production data shall be filled or the connectivity to production registers established) the contractor shall have free access to the "M2 testing	

environment", after the M2 (or any later moment as described above) the testing environment shall be converted to "production environment" and the access of the contractor may be limited

After the M2 (or any later moment as described above):

- the (newly created) testing environment is to be used for acceptance tests as described above (incl. performance tests, for this, the testing environment virtual infrastructure configuration may be temporally matched to the configuration of the production environment, where the licenses and the required resources configuration have to cover this scenario), while a second instance of the application (or a third, fourth…) for development purposes is possible, if allowed by the application system being used by the contractor and/or as far covered by the licenses, for example those that have been calculated for the coverage of the performance tests (this means also separate virtual servers, if necessary, however sharing the same resources as the rest of the testing environment)
- production environment: shall be already used as described in the project schedule, may be without the possible direct access by the contractor.

Note: The term "environment" may refer either to a virtual infrastructure (Infrastructure as a Service, provided within the infrastructure of Georgia) or any other instance (tenant) of the platform services of the platforms forming the Georgian platform.

AR004	AR004 Network protocols

- Every part (of the client application) that is connecting to the application server is to employ secure protocols running on the top of the standard TCP/IP protocols (e.g. is user-friendly securable by certificates and/or means of asymmetric cryptography, routable, VPN tunnel-able etc.). Should any other network/transport/connection/relational/presentation protocol be employed, it has to meet the requirements specified by the features of the TCP/IP stack or these features have to be ensured programmatically within higher levels of protocols including the application one (if possible by the specification of the app. protocol, if not, such protocol cannot be used as substitute for the requirements above))

AR005	AR005 Connection reliability

Client - Server connection must not rely on stable network connections (especially in case of dial-up VPNs).

AR006	AR006 Software licenses

- Should the solution proposed by the candidate require any licenses, these licenses have to be calculated within the delivery price and provided as a part of the project.
- The licenses calculated and provided within the delivery have to have NO limitation when regarding the migration on different hardware, since this process is under automatic control of the underlying virtualization platform.
- These licenses provided have to be life-longs. Should they have a validity period specified (such as maintenance/assurance or extended support), then it is understood, that the calculation for a license provided within the delivery has to cover at least the entire time frame of the project, including the warranty period and + 1 year afterwards. If there is such a license, then this license has to be enlisted separately in the proposal and in the contract including its complete (commercial) specification.
- If any of the licenses is not a life-long licence, then the candidate has to provide also the list and costs for further maintenance/renewal of the license for 2 years period (based on the current prices, as if the license renewal/maintenance would be purchased (directly from producer or for a price not lower or higher as recommended by the producer) to the date within one month before the proposal without any specific promotional and other similar benefits). This applies also for the licenses for developers (libraries, third party tools, VDEs etc.) needed.
- The licenses have to be able to cover the requirements of both environments in accordance with requirement "Operation environment architecture".

This does not apply for those **SITIAgri** licenses that are already held by the beneficiary and/or Ministry of Agriculture.

AR007	AR007 Software licensing

The entire solution being part of the delivery is foreseeing the handover of the license for any kind of use to the final user of the software (the government of Georgia and its agencies). Thus:

- any tool necessary for the development and/or build or deployment of the solution has to meet requirements as specified in AR006
- AND the output of the work of the contractor that might form a licensable piece of work must be licensed to the final user.

AR008	AR008 Backup solution
The backup solution shall use the current means of backup of the SITIAgri platform as they exist.	

9.2.2 Non-functional requirements - Integration (IR)

These requirements specify the list of other parts/systems that the application(s) should integrate with. If this integration is not only process-based, but also software based, then the appropriate architectural concepts and/or interfaces specifications can be found in the appropriate part of the documentation.
The Phytosanitary register information space is required to rely on interaction with automated information systems, which form the following information resources:

IR001	IR001 Register of economic agents
Register of economic agents of the Justice house (Ministry of justice) for: • Searching of subjects of economic agents in order to download the metadata of the subject (when searching during introducing of the subject into the system manually through GUI as well through WS). • Searching of subjects of economic agents in order to evaluate if an economic agent solely present in the Phytosanitary register has already been introduced into the register of ministry of justice. • Download of the metadata during refresh/update of the subject in Phytosanitary register based on a subject in register of economic agents of ministry of justice.	

IR002	IR002 SITI SSO
SITI SSO services (using JDBC or internal application mechanisms of the system)): • For authentication of users accessing the Phytosanitary register • For download of respective groups the user is part of	

IR003	IR003 Means of access
The external systems will be accessible using methods according to documentation given to the contractor after signing of the contract and relevant documents and use them in scenarios as defined above and/or during detailed analysis. The scenarios may include not only basic / automated / batch identification and data completion on the subjects/entities, but also automatic updates, resulting integrity cross-checks and warnings etc. based on the use-cases of the respective registers and their possibilities/requirements.	

IR004	IR004 Integration fall-back
If any of the (integrated) registers should not perform according to requirements needed by the (implemented) phytosanitary register, following measures are to be taken by the contractor and other parties involved (one after another or in parallel, as the situation requires): • Specification of the under-performing system and negotiation for diagnosing bottlenecks and other issues in the implementation or in the underlying infrastructure that might cause the problems. For this negotiation the presence (preferably on-site) of the contractor is required. • Rectification of the state using optimization on the side of the phytosanitary register (such as for example but not limited to asynchronous calling with the possibility of listing the tasks for (user) reaction on the returned asynchronous calls, limitation of the minimal set or range of input parameters etc.) • Rectification of the state using batch processing (again with user-accessible lists of errors / ambivalences to be decided/fixed) and/or the possibility to input these values as “text-only” (without the synchronous verification on the respective register) • Cancelling of the integration of register with the respective external register – as a written amendment to the contract only – including the delivery of any changes needed to ensure the operation of the system according to all other specification within the scope and original budget of the project up to a degree the contractor can be fairly asked.	

9.2.3 Non-functional requirements - Interfaces (GUI/WS..) and user requirements (UR)

These are general requirements for the structure and layout of the interfaces the software shall be employing to communicate with its outer world, including the users.

UR001	UR001 Web application
• For any parts/modules used by more than 3 users or more than 2 users on geographically distant location or more than 2 users in different organization or environments it is required, that the client application is a web application (providing a web interface to the users) (Note: The client-side application MAY contain any security/validation and other relevant business-functionalities especially for interactivity reasons, provided that the very same are being employed on the server side.)	

UR002	UR002 Supported browsers
Supported browsers shall be: • Chrome and • IE/Edge or their successors (all in current version and one previous major version, as long as supported by the manufacturer to the date of M2/M3).	

UR003	UR003 Multiple instance
The software should allow for each user to open and run more the one instance, without the instances interfering with each other, as far as the underlying framework platform allows.	

UR004	UR004 Multilingualism
The system, including the prototype/pilot/testing semi-products, delivered at any stage of the project, has to have a bi-lingual user interface (implemented in a manner allowing easy localization of UI texts into next language (XML, DLL...)). The minimum required languages for the delivery shall be featuring an "English" and "Georgian" ("Kartuli ena" / KAT) version of all descriptions, labels, short texts and context help tool-tips (mock-up prototype delivered by M1 may be in English only), if not agrreed otherwise within contract amendment. This also applies for selection lists.	

UR005	UR005 Autocompleting
Any value being edited that is based on an enumeration list has to provide an auto-completion feature when being edited in a graphical user interface as far as the underlying platform allows.	

UR006	UR006 Display size and resolution - workstation screens optimization
The GUI has to be fully working (e.g. fully visible without horizontal scrolling (unless necessary as given by functional requirements) and/or any kind of additional magnification and/or objects layering/overlapping and design-responsive to any resolutions as stated here) on the monitors of client PC workstations: • Physical screen sizes: 15" and above • Resolution: starting at 1600px horizontally and 900px vertically. • Aspect ratios: 4:3, 16:9, 16:10, 1:1, 3:4, 9:16 and 10:16	

UR007	UR007 Display size and resolution - mobile clients functionality
The GUI shall not prevent the usage (e.g. visible and allowing to carry out all actions without objects layering/overlapping and design-responsive to any resolutions as stated here) of portable mobile client devices (such as tablet, smartphone; incl. *dpi* dependency): • Physical screens size: from 7'' up to any (even hand-luggage sized) • Resolution: any • Aspect ratio: any • Shaped/Cut-out displays: fully rectangular displays optimization only, w.o. cut-outs	

UR008	UR008 Credits
The logo of the "Czech development agency" has to be visible on all GUI input screens (excl. dialogues; it may be placed in header or footer), on at least ~6% of surface of splash screens/title pages/graphical materials and at least ~4%	

of documents accompanying the software, all of them in accordance to the „Graphical manual“ as published on the http://www.czechaid.cz/wp-content/uploads/2016/09/Graficky-manual-CR-pomaha-a-loga.zip

UR009	UR009 Externally loaded 3rd party references
When the application uses any 3rd party components, such as but not limited to cascading style sheets, scripts, fonts, images etc. then these have to be bundled together on the same installed instance provider as the application. Referencing from 3rd party external sources is not permitted. The bundled components have to allow such bundling and redistribution within their license.	

9.2.4 Non-functional requirements - Performance (PR)

List of required performance measures.

PR001	PR001 Number of users
Expected no. of concurrent users: • internal min.: 60, max 100. • external users (from the groups of Revenue service, other EU countries): may be expected at maximum 10 concurrent users (however this has to be expected for the worst case (longest response) scenario when overlapping	

PR002	PR002 Number of workstations
PCs that could be eligible to run the system: • internal users: 500pcs+. • external users: any	

PR003	PR003 Network bandwidth usage
• Working without any uncomfortable delay (see "Response time") on ADSL lines from 1MBit (latencies may exceed 200ms) download upwards up 4MBit (60% of clients may reach the highest theoretical download speed;) (This delay should be solved also for including documents (files) uploads - implemented as non-blocking asynchronous GUI background batch tasks if necessary.) • 40% of clients are employing broadband and fibre channel connections (10-20Mbit) • Administration (NFA central office) have direct optical link.	

PR004	PR004 Response time
• It is required, that the software response to the user actions is immediate (= such a short time, that an average human cannot tell the time period, thus under approx 40 msec). • The response for a user action requiring any data loading (does not apply for enumerations that can be reasonable preloaded) shall be either within 3 seconds (incl. GUI rendering, excl. those factors the contractor objectively could not influence in a direct or indirect manner) or has to be followed by a blocking waiting dialog with cancellation possibility or implemented as a non-blocking batch system with possibility (GUI) of management of the tasks in a cue. • Any process/action/requirement resulting in processing time longer than tens of seconds (e.g. 1-2 minutes or more, such as report generating) has to be defined and implemented as an automated batch process with a GUI enabling the user control of the queue (manual start, scheduling, log/output lists for obtaining the results (if not agreed otherwise) and a list of running batches with the possibility of termination), as proposed and agreed in the “Analysis and system design documentation”. This does not necessarily apply for reports where appropriate. • The abovementioned requirements have to be followed as far as the underlying platform framework allows, by using all possible means of such a platform or framework.	

9.2.5 Non-functional requirements - Security (SR)

What threats and risks should the system address and how, including ACLs etc.

SR001	SR001 Information integrity and authenticity
The requirement of information integrity means a condition of data, when they preserve their content ensuring its expected level of integrity, accessibility and efficiency and are interpreted unambiguously despite of- and protected	

from- unpredictable influences causing their loss, denaturation, distortion and unauthorized use, where and up to the extent the contractor may be held liable for (esp. but not limited to the design of transactions, data manipulation, storage and backup solutions and their configuration design and operation during any kind of maintenance tasks). The requirement of information veracity is the degree of data compliance of data stored in computer memory to the actual condition of the objects in a specific area of the system that they represent. This means especially the fact that the system has to ensure not to distort and/or omit/loose data being committed into it without corresponding reporting of the error or condition preventing to keep the data authenticity.

SR002	SR002 Information confidentiality & non-repudiation.
Means the system has to be designed in such a way that it is providing means and resources for: • enabling the personal liability (under the laws in force) of employees working in the system for unauthorized use and dissemination of personified confidential information (e.g. access control, logging) • and preventing them to extent or execute their authorization beyond its original designation.	

SR003	SR003 AAA
Authentication and authorization of the system shall be done against the NFA/Ministry of agriculture SITI SSO.	

SR004	SR004 Authorization groups
Groups aggregating the various Phytosanitary register functionalities (allowed for the specified group) shall be mirrored and created in the respective SITI SSO as far as it alows.	

SR005	SR005 Data record access management
All records have to be accessible only based on the organizational structure that means, that any operator may see only those records created (and "owned") by him, his colleagues from the same department or of his subordinate departments, if not specified otherwise for his/her user-role.	

SR006	SR006 Network-level security prerequisites expectations
The application might not be set up in any secure and consistent enterprise environment (the operators for the various organizations may not be using any kind of unified infrastructure) – this applies also for example to the local storage of configuration (if applicable) of the client application etc. The public part of the application may be set up against the open public non-restricted access network (on technological level) thus any part of the application reachable before and also after performing authentication has to be secured against all known attacks against- and weaknesses of- all the platform whose services are exposed to the public, directly or indirectly. A suitable segregation of the computing nodes (DMZs, multi-layer networks separated by FWs etc.) should be done where appropriate (especially when protecting either personal/user data and those data entities/attributes that form the meaningful information the register is about to supervise/authorise).	

9.2.6 Non-functional requirements - Operation and maintenance (OR)

These requirements specify what limitations and constraints the system should respect concerning its further operation and maintenance. This includes but is not limited to:

- warranty terms
- SLAs
- administration/configuration files/possibilities
- etc.

OR001	OR001 Operating environment
The contractor is obliged to use the platform (Infrastructure as a service) of virtual servers provided by the NFA services, operated by the Georgian Ministry of agriculture and integrate into them as required by the platform and its operators. Preliminary structure of the deployment may be observable from the deployment diagram earlier in this document.	

OR002	OR002 Network architecture
All inner functions of the software shall be accessible through the internal NFA network, including branch-offices using VPN (provided by the NFA)	

OR003	OR003 Required HW resources specification
The contractor has to specify the expected required hardware resources consumed by its application: • as part of the tender proposal • as part of the "Analysis and system design document" at M1 • with latest update 1 calendar year before production environment start planned in the schedule The request has to be corresponding to the conditions and requirements specified by the Georgian party; there is no limitation to the total amount of resources required. • It is expected, that the specification gives the total amount of servers/CPU/RAM/storage and their respective breakdown on single servers. • The contractor is entitled to require any changes to his virtual data center at any time provided it does not exceed the total amount of resources reserved and the frequency rate of such changes remains in a reasonable limit per month. • The required configuration of resources has to be able to cover the requirements of both environments in accordance with Operation environment architecture requirement.	

OR004	OR004 SLA
This contract does not expect any operation, thus it does not define any SLAs with the exception of warranty SLA.	

OR005	OR005 Warranty SLA
(See linked document)	

OR006	OR006 After-warranty support
1 year after the end of warranty period a free support for the Georgian programmers shall be present (remote only).	

OR005 Warranty SLA

During the warranty period, the contractor is obliged to provide solutions in following time frames:

Error grade	Reaction time (using el. communication)	Commence of rectification - a. event occ.:	Solution time (or providing an temporary solution) - after event occurrence:
A	2 hours	*not specified*	5* hours
B	2 hours	*not specified*	1* working day (8 working hours)
C	2 hours	*not specified*	5 working days or longer, if agreed by the contracting authority

Error grade "A" means such an error that halts the operation of the system completely or prevents the execution of any of the key processes (use-cases) of the system within any step of these processes. A temporary solution of an A-grade error is regarded as a (reported) B-grade error.
Error grade "B" means such an error that either allows the operation of the system however with difficulties or using alternate or more complicated methods/approaches or prevents the execution of support processes (use-cases) within any step of these processes.
When a B-grade error preventing the execution of typically administrative processes results in the impossibility of execution of any of the key processes by any party, it is regarded as an A-grade error.
A temporary solution of a B-grade error is regarded as a (reported) C-grade error.
Error grade "C" means any other errors or the claiming of other agreed and not delivered features etc.

*) Even in case that an error may require the physical presence of the contractors representative on-site, these times may be not prolonged unless agreed in advance as a contract amendment.

9.3 Requirements catalogue - Other (software) requirements

The project-based requirements.

9.3.1 Other (software) requirements - Software legal requirements (LR)

LR001	LR001 Legitimacy and respect for human rights
The creation and operation of the system should be in accordance with the national end European legislation (specifically as enlisted in respective requirements below), international treaties and agreements, where and up to the extent the contractor may be held liable (specially concerning design and the execution of functionality of the system).	

LR002	LR002 Control
Stands for the system's ability to support and provide means for the totality of organizational and technical measures for the system, ensuring high quality of state information resources, high reliability and correctness of their use in accordance with the law and ensuring operational and convenient access to information for the user, according to its access level;	

LR003	LR003 State identification of objects (persons) of registration
It is required, that the system fully supports the state identification of objects of registration, which provides for existence of a single identification index for each of them (if not required otherwise by respective exceptions as defined in the functional requirements).	

9.3.2 Other (software) requirements - Testing requirements (TR)

How (using what tools and techniques and what processes and organization) shall the resulting product be tested. May also contain acceptance criteria as whole.

	TR001 Test cases requirements
• All tests/test cases have to reference either a requirement specified already in this Contract/Tender documents or a requirement provided during the analysis. One requirement may result in multiple tests, and one test may cover multiple requirements, if necessary (e.g. the level-of-detail should provide at least such a detail, that each test-case belongs to each function/requirement or small groups thereof). (Note: this does not apply, if necessary, for the "global" (non-functional) requirements, which may be tested either 1. within another test case (but this has to be stated as a requirement being tested by the test) 2. separately within an acceptance test or 3. within a test without a scenario: a mere "statement" test, such as "according to chapter XYZ in the documentation the application has 3 tires" or "(…) the system has a software application with functionalities covering each of the 3 modules") • Each test has to provide a step-by-step manual for performing the relevant test, including all input values and expected outputs. • If a test may fork into multiple variants based on the data input, all possible inputs (or at least their groups – classes of values) have to be tested. • Each test case (especially in the printed version being used as annex for the acceptance M2) has to provide free space, where the result and final resolution (passed/passed with objections/failed) can be noted. • The test cases are to be described in English language (except the labels/buttons/software I/O texts and data I/O). • The first testing will be done by the contractor, but the test scenarios will be accessible and the second times run by the NFA as selected during the acceptance procedure. The above mentioned does not intend to influence nor it may not replace any internal testing procedures of the contractor.	

	TR002 User acceptance tests

Based on the test cases the system will be tested by UKZUZ and/or NFA during the acceptance procedure for M2 and M3.

9.3.3 Other (software) requirements - Migration requirements (MR)

What data/knowledge from previous instances of the product (application) shall be maintained and migrated into the new version (if any).

MR001	MR001 No migration
The project at this development stage does not foresee any data migration from no previous software versions or other data sources. This is without prejudice to (this shall not affect): • any requirements for altering design or project actions in such a manner to make this possible • or any requirements emerging in later stages of the project or later follow-up projects.	

9.4 Requirements catalogue - Other (project) requirements

9.4.1 Other (project) requirements - Project legal requirements (PL)

PL001	PL001 Contractor subject requirement
The contractor has to be an active legal subject (company) or self-employed physical person, established with accordance with its country's legislation, being able to fulfil the liabilities represented by this documentation and not undergoing any winding-up, liquidation or bankruptcy petition process.	

PL002	PL002 Contractors behaviour
Any project-related action or step (including any kind of business communication) of the contractor has to meet: • Czech law • Georgia law • International laws and contracts • Polite and respectful manners of business relations	

9.4.2 Other (project) requirements - Project management requirements (PM)

What managerial approaches and processes should be followed and what results achieved within the project of:

- development
- maintenance and operation
- testing
- implementation and setup
- handover
- etc.

Including DR&CP (Disaster recovery & Contingency planning) scenarios etc.

PM001	PM001 Project management responsibility
The contracting authority expects that the project is being managed and coordinated by the successful candidate, using any of the currently recognized formal project methodologies.	

PM002	PM002 Project documents repository