Development of systems and preparation of services necessary for EESSI operation under APSK02 (DePoE)

Project proposed by Urad pre dohlad nad zdravotnou starostlivostou (UDZS)
under Call of proposals VP/2012/004

acronym: DePoE

A.1. Eligible types of actions and initiatives

The objectives of the project "Development of systems and preparation of services necessary for EESSI operation by APSK02" can be summarized as follows:

1.   Preparation of Access Point APSK02 for EESSI operation,
on network, hardware and software levels and for national application interconnection; training of maintenance and operation staff; with focus on security and robustness.

Urad pre dohlad nad zdravotnou starostlivostou (UDZS) is an APSK02 operator. Since AP serves as the central connection point for communication in the given sector(s) for the state, it is mandatory that this service is very well prepared. Sufficient network connection and its availability has to be ensured, sufficiently powerfull and redundant hardware resources need to be obtained and set-up, followed by installation and configuration of software platform and application software provided by the Commission. Configuration of access point application software provided by the Commission for its correct communication with national application is included in this objective.
Installation of WEBIC as a testing tool is part of the objective. If suitable testing tool will be available at the time of execution of activity, it may be used instead.
During this activity, the internal staff of UDZS will be included in activities for all levels of AP setup and will receive training to be able to successfully operate AP once in production.
Security of the system and the exchanged data on the AP level is very important and is also targeted in this objective.

2.   Finishing changes in internal IT system of UDZS necessary to implement EESSI

Adaptation of internal IT system module for E-Forms exchange and management (abbreviated as ESF), which has been already partly carried out, is targeted in this objective. The adapted module will serve as part of national application. This adaptation will provide application support for executing all business processes at the level of UDZS, although few will be handled by portal solution in Objective 3. Interconnection of this module with economic systems and also with registers, which will serve for person identification are part of this objective.

3.   Providing means of data exchange and portal solution for competent institutions, providing neccessary support to competent institutions to prepare for EESSI

The objective is to provide competent institutions with necessary services for communication withing EESSI via APSK02, which means developing messaging system for exchange of national electronic documents, and provision of portal solution, which will allow

competent institutions to handle EESSI flows with small volumes without any large investments on their side. The portal solution also serves as transitional tool for the institutions to development of necessary changes inside their systems. All comunication regardles using portal solution or messaging system will be routed via national application.

UDZS has worked a lot in this area already. Activities will continue to finish previous work.

Close cooperation with institution is important. The objective is to continue to further disseminate specification for message exchange and EESSI rules and inform about implementation on UDZS side. This process will be supported by iterative testing activities from Objective 4.

4.   Testing EESSI business message exchange,
with national and international parties, verifying correct function of internal support for business processes

For correct operation of EESSI system thorough testing of all business processes supported by the message exchange are absolutely necessary and in our opinion most important part of the project. UDZS will apply iterative approach to testing. This objective aims at testing of application software developed in objectives 3 and 4, providing testing environment to competent institutions and executing business message exchange tests with competent institutions. To ensure the compliance with EESSI message exchange standards, bilateral end to end tests with usual partners (Czech Republic, Austria) are also part of the objective. Any errors identified in the objective related to the international message exchange will be reported to the Commision via JIRA.

A.2. Justification

Based on national strategy in Slovak Republic, the responsibilities of providing services regarding social security in EESSI project were divided between 3 access points. UDZS was given the responsibility to operate as the second access point APSK02.

In previous efforts, UDZS together with health insurance companies formulated strategy for national EESSI implementation under APSK02, where UDZS serves as central point for message exchange. This approach is described in detail in A.4 Methodology.

i.   identification of perceived needs and constraints in the target groups;

In order to ensure EESSI project realization and its operation in the health sector and partly other sectors in Slovak Republic, which are covered under APSK02, active involvement of UDZS and health insurance companies is necessary. UDZS serves as APSK02 operator, liaison body and serves as central point in Slovak Republic for different agenda in health sector(such as reimbursement). Competent institutions - health insurance companies are in direct contact with the citizen and ensure that the citizen receives necessary health care. In order to prepare for EESSI operation, both UDZS and health insurance companies need to ensure the transition from paper to electronic exchange, or changes to current national electronic exchange, which means changes to structure of stored and exchanged data, changes to processes, IT systems, etc. The resources for these changes are limited. UDZS does not have personal capacity to process large volumes of exchanged information in paper format. Development of national EESSI systems is necessary in order to ensure international EESSI operation and will have impact on all parties in the EESSI project. The operation of EESSI project will subsequently lead to improvement of social security services to citizens in Slovak Republic, European Union and other participating countries.

ii.   list of target groups with an estimate of the anticipated number of direct and indirect beneficiaries;

Target groups are:

1.	Employees of UDZS with responsibilities and activities in agenda and support connected to EESSI
Beneficiaries: 11 direct beneficiaries (11 employees working on agenda with direct connection to EESSI)
2.	Competent institutions (health insurance companies) in Slovak Republic
Beneficiaries: 3 direct beneficiaries (3 health insurance companies)
3.	All institutions involved in EESSI message exchange
Beneficiaries: 2 direct beneficiaries (Czech and Austrian institutions involved in bilateral testing), thousands of indirect beneficiaries - social security institutions
4.	Citizens of Slovak Republic
Beneficiaries: 5.5 million indirect beneficiaries
5.	Citizens of EU and other countries connected to EESSI
Beneficiaries: over 500 million indirect beneficiaries

### iii.	reasons for the selection of the target groups and activities;

The activities of the project "Development of systems and preparation of services necessary for EESSI operation by APSK02" are necessary to successfully implement EESSI on national level in Slovak Republic. Main target groups are UDZS and health insurance companies, without which the national implementation of EESSI would not be possible. This selection therefore stems directly from the ambition of EESSI project realization and system of social security in Slovak Republic. UDZS has already invested large financial and personal effort to EESSI implementation.
Other target groups (institutions involved in EESSI, European citizens, …) are in fact also target groups for the EESSI project itself (on the European level) and are selected with the goal to improve the rights of the citizen in area of social security.

### iv.	relevance of the project to the target groups;

This project will ensure the The project will improve the software support for tasks performed in agenda of UDZS in relation to EESSI. The project also ensures all aspects of operation of the access point APSK02 by UDZS, in order to successfully support the preparation and operation of the EESSI project in the whole health sector in Slovak Republic. The cost of paper used by UDZS for communication will be lowered by great extent after EESSI goes operational.
Health insurance companies will benefit from the project in the sense of receiving necessary support to implement EESSI. Operation of EESSI project will lower their cost incurred by paper agenda and allow the information exchange to be realized much faster.
Other target groups are targeted by the EESSI project itself.

### v.	relevance of the project to the objectives;
vi.

The project has the ambition to meet all the objectives set out in A.1. All actions of the project are directed toward meeting the objectives. Since the project duration is limited, the results of the project will be sustained and improved before and during EESSI operation.
Since all activities of the project are directed towards EESSI operation and compliance on national level, we strongly believe the project corresponds to the objective/subprogramme 3 of the Call of proposals VP/2012/004.

A.3. Detailed description of activities

UDZS has stopped work on EESSI preparation in October 2011. By that date it has already partly developed national application consisting of portal solution for health insurance institutions and internal module for UDZS agenda. Activities of this proposal will continue in previous efforts.

This proposal consists of activities, which could be categorized into 3 groups:
*   access point preparation (Objective 1)
*   development of national application (Objectives 2, 3)
*   testing and support for health insurance companies (Objective 4)

This project is planned according the scheduled start of EESSI on 1.5.2014. Any changes to this planned date may have impact on project planning. The project requires production ready documentation and software from the Commission to be available by 1.3.2013 (T0 before 1.3.2013).

Activities

Remarks: Level of participation was estimated in man-hours, for clarity it was converted to man-days. When planned meeting with contractor or health insurance companies is part of the activity, it is written in bold before description of the action. Other meetings may take place, when neccessary.

Activity 1.   HW infrastructure design and physical installation
Start date: 12.12.12   **End date:** 15.12.12
Responsible: UDZS   **Participation:** UDZS (1,33 man days), Contractor (2,75 man days),
Meeting with contractor
Description: Revision of HW requirements for external and internal applications, physical installation of hardware components. Initial meeting of the project. Result: HW is in place ready for SW installation.

Activity 2.   Training for linux based operating systems
Start date: 01.01.13   **End date:** 30.01.13
Responsible: Contractor   **Participation:** UDZS (1,6 man days), Contractor (2 man days),

Description: Introduction to Linux based systems necessary for DNS, NDS, RI installation – training for UDZS employees carried out by the contractor. Result: Employees have basic skills for work with Linux based OS.

Activity 3.   Deployment of DNS and NTP server in sTesta connected subnet
Start date: 01.02.13   **End date:** 15.02.13
Responsible: Contractor   **Participation:** UDZS (3,47 man days), Contractor (3 man days),

Description: Preparation of network services within demilitarized zone connected to the provider of sTESTA access, setup of DNS and NTP server in virtual infrastructure. The task is carried out by the contractor, with participation of two UDZS employees. This also involves inclusion of the server data to automatic backup policy, monitoring setup, alerts, restoration procedures. Training on installation, basic checking if the services are running, and short manual for these tasks will be provided by the contractor. NDS and NTP servers are deployed

Activity 4.   Network configuration after DNS and NTP deployment, FTP/HTTP connectivity verification
Start date: 15.02.13   **End date:** 28.02.13
Responsible: UDZS   **Participation:** UDZS (1,33 man days), Contractor (1 man days),

Description: Network configuration is necessary after installing these services, namely firewall configuration and configuring the local DNS services to point to this server in case of sTesta dns names. Basic connectivity tests for accessing the services which are used today such as sTESTA FTP Repository access, or MMI services.
sTesta connectivity and services are verified

Activity 5.   NDS and RI server deployment in acceptance
Start date: 01.03.13   **End date:** 15.04.13

Responsible: Contractor   **Participation:** UDZS (13,33 man days), Contractor (5,12 man days),

Description: Preparation and deployment of NDS services within demilitarized zone connected to the provider of sTESTA access. Configuration of NDS automatic startup, automatic error reporting and testing the connectivity and operation on OS level and application level. Preparation and deployment of services of reference implementation within demilitarized zone connected to the provider of sTESTA access. Configuration of other services, database, application, automatic error reporting and testing the connectivity and operation. Participation of two UDZS employees. This also involves inclusion of the server data to automatic backup policy and restoration procedures. Training on installation, basic checking if the services are running, restoration and description in short manual of how these can be carried out will be provided by the contractor. Generating and installation of acceptance certificates. Training for given tasks. The AP is deployed in acceptance.

Activity 6.   WEBIC deployment in acceptance
Start date: 30.03.13   **End date:**   15.04.13
Responsible: Contractor   **Participation:** UDZS (3,47 man days), Contractor (1,5 man days),

Description: Preparation of WEBIC server within demilitarized zone connected to the provider of sTESTA access. WEBIC will serve as a testing tool. Participation of two UDZS employees. WEBIC deployed in acceptance

Activity 7.   Routing and adaptors setup
Start date: 15.04.13   **End date:**   20.04.13
Responsible: Contractor   **Participation:** UDZS (1,07 man days), Contractor (1 man days),

Description: Configuring adapters for proper national routing and for the needs of testing. Training in these tasks for employees.

Activity 8.   Agreement on simple bilateral technical test
Start date: 15.04.13   **End date:**   20.04.13
Responsible: UDZS   **Participation:** UDZS (0,67 man days), Contractor (0,62 man days),

Description: On previous bilateral meeting Austrian partners of UDZS agreed to test the technical exchange of messages with UDZS. Agreement on details for technical / connectivity tests. Who, when and how determined, contacts exchanged.

Activity 9.   Basic AP connectivity test
Start date: 20.04.13   **End date:**   10.05.13
Responsible: UDZS   **Participation:** UDZS (1,33 man days), Contractor (1,25 man days),
Meeting with contractor,
Description: Basic connectivity test for exchanging SED messages via WEBIC in one flow in/out. Connectivity via EESSI network verified.

Activity 10.   Evaluation of production ready documentation ,open questions, impact on existing implementation
Start date: 01.04.13   **End date:**   01.05.13
Responsible: Contractor   **Participation:** UDZS (8,53 man days), Contractor (10 man days),
Meeting with contractor,
Description: Some problems have risen with the previous implementation efforts in connection with the existing message exchange protocol, bugs in the software, etc., which were also identified by other countries. During this phase the documentation from the Comission and also the SW provided by the Comission will be studied and solutions to the problems identified will be checked.Work will be carried out by both the contractor and UDZS employees. This will require to reread and study all the documentation available to the EESSI project from the Comission, completing the existing national documentation and its comparison with the new documentation. There may be changes in the design of the new version of software provided by the Comission, or changes in the exchange protocol, addressing, etc. (such as flow attribution) which may differ from the previous design and rules. Therefore the impact on the already developed part of national application has to be identified. This task will be carried out by the contractor. Result: Clear idea about changes and previously missing pieces in the specifications.

Activity 11.   Kick-off meeting with health insurance companies
Start date: 01.05.13   **End date:**   05.05.13
Responsible: UDZS   **Participation:** UDZS (4,27 man days), Contractor (3 man days),

Meeting with contractor, Meeting with health insurance companies,
Description: After the project was temporarily stopped in 2011, information meeting will be necessary for mutual status information exchange. Possibilities will be discussed considering previous efforts and recent changes. Common direction will be agreed on.

Activity 12.   Determination of next steps in relation to new facts
Start date: 01.05.13   **End date:**   10.05.13
Responsible: UDZS   **Participation:** UDZS (2,4 man days), Contractor (2 man days),
Meeting with contractor,
Description: Based on evaluation stage and discussion with health insurance companies, internal decision and agreement with contractor must take place if any changes to the architecture or national application are necessary and what is the impact on the project and insurance companies. This will be later incorporated into previously prepared analysis document and proposed to insurance companies for approval. Internal decision on what is needed to be implemented.

Activity 13.   Preparation of messaging system concept
Start date: 05.05.13   **End date:**   15.05.13
Responsible: Contractor   **Participation:** UDZS (2,4 man days), Contractor (7,5 man days),
Meeting with contractor,
Description: Concept and necessary specification of messaging system will be prepared.

Activity 14.   Finalizing the analysis document
Start date: 01.05.13   **End date:**   15.05.13
Responsible: Contractor   **Participation:** UDZS (6,4 man days), Contractor (7,5 man days),

Description: This activity updates the analysis document for the UDZS EESSI Project, based on new documentation and software design. Some areas of the analysis, such as system messages were not clearly defined in the previously available documentation. Also some functionality in the national application was left out and needs to be specified, including specification for SED updates and directory information updates. Draft analysis ready.

Activity 15.   Preparation of documentation for insurance companies, incorporating comments
Start date: 25.05.13   **End date:**   15.06.13
Responsible: UDZS   **Participation:** UDZS (1,33 man days), Contractor (3,75 man days),

Description: Before the documents of analysis are agreed on, there will be phase for commenting the documents. Changes will be subsequently incorporated into these documents. Final updates will be made to the document after the meeting with health insurance companies - next step. **A**nalysis ready to be agreed on, or points for discussion identified.

Activity 16.   Meeting with health insurance companies to agree on analysis and changes
Start date: 25.05.13   **End date:**   15.06.13
Responsible: UDZS   **Participation:** UDZS (8 man days), Contractor (12 man days),
Meeting with contractor, Meeting with health insurance companies,
Description: Proposing the necessary changes to the insurance companies. Materials will be sent to the insurance companies with a meeting invitation. Meeting will be held with the aim to agree on possible changes and further direction of the project. UDZS, contractor and insurance institutions will all attend the meeting.
Agreement on analysis and implementation aspects of the project. Information about further steps.

Activity 17.   Technical tests for connection to AP
Start date: 15.06.13   **End date:**   20.06.13
Responsible: Contractor   **Participation:** UDZS (0,53 man days), Contractor (2 man days),

Description: Technical tests carried out by the contractor to check the connection between AP and national application via adapters in ESB

Activity 18.   National certificates preparation (testing)
Start date: 15.06.13   **End date:**   20.06.13
Responsible: Contractor   **Participation:** UDZS (1,87 man days), Contractor (2 man days),

Description: In order to ensure security on national level, national scope certificates need to be exchanged for testing.

Certificates will be generated and exchanged based on already existing procedures. The contractor will install certificates into application software.

Activity 19.   Preparation of portal solution for pilot testing
Start date: 15.06.13   **End date:**   10.07.13
Responsible: Contractor   **Participation:** UDZS (5,33 man days), Contractor (30 man days),

Description: Based on updated analysis, common agreement and previously stated requests, the portal solution of the national application will be updated by the contractor.

Activity 20.   Making DS and IR services available to institutions
Start date: 20.06.13   **End date:**   10.07.13
Responsible: Contractor   **Participation:** UDZS (2,67 man days), Contractor (12,25 man days),

Description: The contractor will provide services of IR and DS to insurance institutions based on terms agreed in analysis.

Activity 21.   Update of MD entries for testing
Start date: 01.07.13   **End date:**   10.07.13
Responsible: UDZS   **Participation:** UDZS (1,6 man days), Contractor (1 man days),

Description: Changing records and including testing institutions for testing purposes via WEBIC and via national application.

Activity 22.   Pilot internal testing of portal solution in selected flows
Start date: 10.07.13   **End date:**   15.07.13
Responsible: UDZS   **Participation:** UDZS (3,73 man days), Contractor (5 man days),

Description: The contractor will provide test scenarios document (draft) for testing. One specific flow will be tested by UDZS. Portal solution and WEBIC under the same AP will serve as communication parties. The testing outcome and list of errors will be presented to the contractor. New test scenarios may be added to testing and draft document. Issues identified as AP or WEBIC errors will be comunicated to JIRA.

Activity 23.   Completion of portal solution
Start date: 18.07.13   **End date:**   30.07.13
Responsible: Contractor   **Participation:** UDZS (6,4 man days), Contractor (27,5 man days),

Description: Given the feedback from testing in one specific flow, solution will be completed in other flows and areas by the developer.

Activity 24.   Preparation of internal module (ESF) for pilot testing
Start date: 18.07.13   **End date:**   30.07.13
Responsible: Contractor   **Participation:** UDZS (5,33 man days), Contractor (15 man days),

Description: Based on updated analysis, common agreement and previously stated requests, the portal solution of the national application will be updated by the contractor, mainly for specific flows in order to allow their testing.

Activity 25.   Pilot testing of internal module ESF
Start date: 30.07.13   **End date:**   05.08.13
Responsible: UDZS   **Participation:** UDZS (8,27 man days), Contractor (5 man days),
Meeting with contractor,
Description: The contractor will provide test scenarios document (draft) for testing. One specific flow will be tested by UDZS. National application (ESF, portal solution) and WEBIC under the same AP will serve as communication parties. The testing outcome and list of errors will be presented to the contractor. New test scenarios may be added to testing and draft document. Issues identified as AP or WEBIC errors will be comunicated to JIRA.

Activity 26.   Completion of internal module ESF
Start date: 05.08.13   **End date:**   10.10.13
Responsible: Contractor   **Participation:** UDZS (6,4 man days), Contractor (80 man days),

Description: Given the feedback from testing in one specific flow, solution will be completed in other flows and areas

by the developer.

Activity 27. Making the pilot testing environment available to health insurance companies
Start date: 05.08.13   **End date:** 07.08.13
Responsible: Contractor   **Participation:** UDZS (6,4 man days), Contractor (1 man days),
Meeting with contractor, Meeting with health insurance companies,
Description: The contractor will deploy the NA so that the specific flows functionalities could be used and tested, including functionality of the portal solution and messaging system with underlying functionality of internal module ESF. UDZS will ensure that these services are accessible, will create accounts for insurance institutions, gather necessary network infromation from insurance institutions to secure access. Meeting with insurance institution will take place, where institutions will be informed about the provided services and testing possibilities, and will also inform UDZS about their work plans.

Activity 28. Support to health insurance companies
Start date: 07.08.13   **End date:** 12.03.14
Responsible: UDZS   **Participation:** UDZS (16 man days), Contractor (10 man days),

Description: During the project execution, UDZS will provide support to institution by providing information, feedback on technical issues, business process explanation etc.

Activity 29. Testing of portal solution and of internal module ESF in all flows
Start date: 07.08.13   **End date:** 21.08.13
Responsible: UDZS   **Participation:** UDZS (42,67 man days), Contractor (17,5 man days),

Description: The contractor will provide test scenarios document (draft) for testing based on previous tests. All flows and functionalities will be tested by UDZS. National application (ESF, portal solution) and WEBIC under the same AP will serve as communication parties. The testing outcome and list of errors will be presented to the contractor. New test scenarios may be added to testing and draft document. Issues identified as AP or WEBIC errors will be comunicated via JIRA.

Activity 30. Making the testing environment available to health insurance companies
Start date: 21.08.13   **End date:** 23.08.13
Responsible: Contractor   **Participation:** UDZS (2,13 man days), Contractor (2 man days),

Description: The contractor will update of deployed national aplication to cover functionality in all flows.

Activity 31. Pilot bilateral testing
Start date: 23.08.13   **End date:** 03.09.13
Responsible: UDZS   **Participation:** UDZS (9,07 man days), Contractor (5 man days),

Description: First bilateral testing in limited scope using the portal solution of national application. Existing scenarios from testing countries will be used, optionally the draft scenarios document will be translated

Activity 32. Support for bilateral testing
Start date: 23.08.13   **End date:** 12.03.14
Responsible: UDZS   **Participation:** UDZS (10,67 man days), Contractor (3 man days),

Description: Coordination of testing efforts between national and european institutions, while providing necessary environment for message exchange and processing.

Activity 33. Pilot testing including health insurance companies
Start date: 23.09.13   **End date:** 03.10.13
Responsible: UDZS   **Participation:** UDZS (25,2 man days), Contractor (10 man days),

Description: First testing with insurance institutions limited in scope. Wide support for institutions is necessary. Tests will be carried out according scenarios prepared during previous tests. Repairs of issues and errors are included in this activity.

Activity 34. NDS and RI server deployment in production, adaptors and routing configuration
Start date: 23.09.13   **End date:** 15.10.13

Responsible: UDZS   **Participation:** UDZS (10,67 man days), Contractor (2,75 man days),

Description: This action is similar as in acceptance, however work is carried out by UDZS. The contractor will provide assistence, mainly in case of problemsand will verify the production environment.

Activity 35.   Training for maintaining, monitoring, troubleshooting and configuring the AP
Start date: 15.10.13   **End date:**   15.11.13
Responsible: Contractor   **Participation:** UDZS (5,33 man days), Contractor (4 man days),

Description: Final training for maintenance of all technology level of the access point and all underlying infrastructure.

Activity 36.   Obtaining AP certificates for production
Start date: 15.11.13   **End date:**   15.12.13
Responsible: Contractor   **Participation:** UDZS (4,8 man days), Contractor (2 man days),

Description: The same action as for acceptance, however higher security requires caution, also the certificates need to be safely stored and backed-up. Maintenance manual for certificates will be provided by the contractor.

Activity 37.   Update of internal network documentation
Start date: 30.11.13   **End date:**   15.12.13
Responsible: UDZS   **Participation:** UDZS (1,6 man days), Contractor (2 man days),
Meeting with contractor,
Description: Update of the local network documentation, stating basic server deployment and functionality withing internal networks, allowed connections and ports

Activity 38.   Testing including health insurance companies
Start date: 01.01.14   **End date:**   25.01.14
Responsible: UDZS   **Participation:** UDZS (40,4 man days), Contractor (10 man days),
Meeting with contractor, Meeting with health insurance companies,
Description: Thorough testing with insurance institutions limited in scope. Wide support for institutions is necessary. Tests will be carried out according scenarios prepared during previous tests. Repairs of issues and errors are included in this activity.

Activity 39.   Exchange of certificates for production
Start date: 01.01.14   **End date:**   25.01.14
Responsible: UDZS   **Participation:** UDZS (2,93 man days), Contractor (1 man days),

Description: The same action as for acceptance, however higher security requires caution, also the certificates need to be safely stored and backed-up

Activity 40.   Bilateral testing including health insurance companies
Start date: 15.02.14   **End date:**   28.02.14
Responsible: UDZS   **Participation:** UDZS (32 man days), Contractor (10 man days),

Description: Integration testing for all functionality of the solution. Issues identified during testing will be provided to the contractor for fixing. Fixing issues by the contractor is also part of this activity.

Activity 41.   Acceptance testing and acceptance of the solution
Start date: 15.02.14   **End date:**   28.02.14
Responsible: UDZS   **Participation:** UDZS (10,67 man days), Contractor (2,5 man days),
Meeting with contractor, Meeting with health insurance companies,
Description: Final acceptance testing with insurance institutions and european partners. Meeting with insurance agencies for acceptance. Meeting with contractor for acceptance. Only issues from previous testing are repeated.

Activity 42.   Deployment of portal solution and internal module ESF in production
Start date: 10.03.14   **End date:**   12.03.14
Responsible: Contractor   **Participation:** UDZS (3,47 man days), Contractor (2 man days),
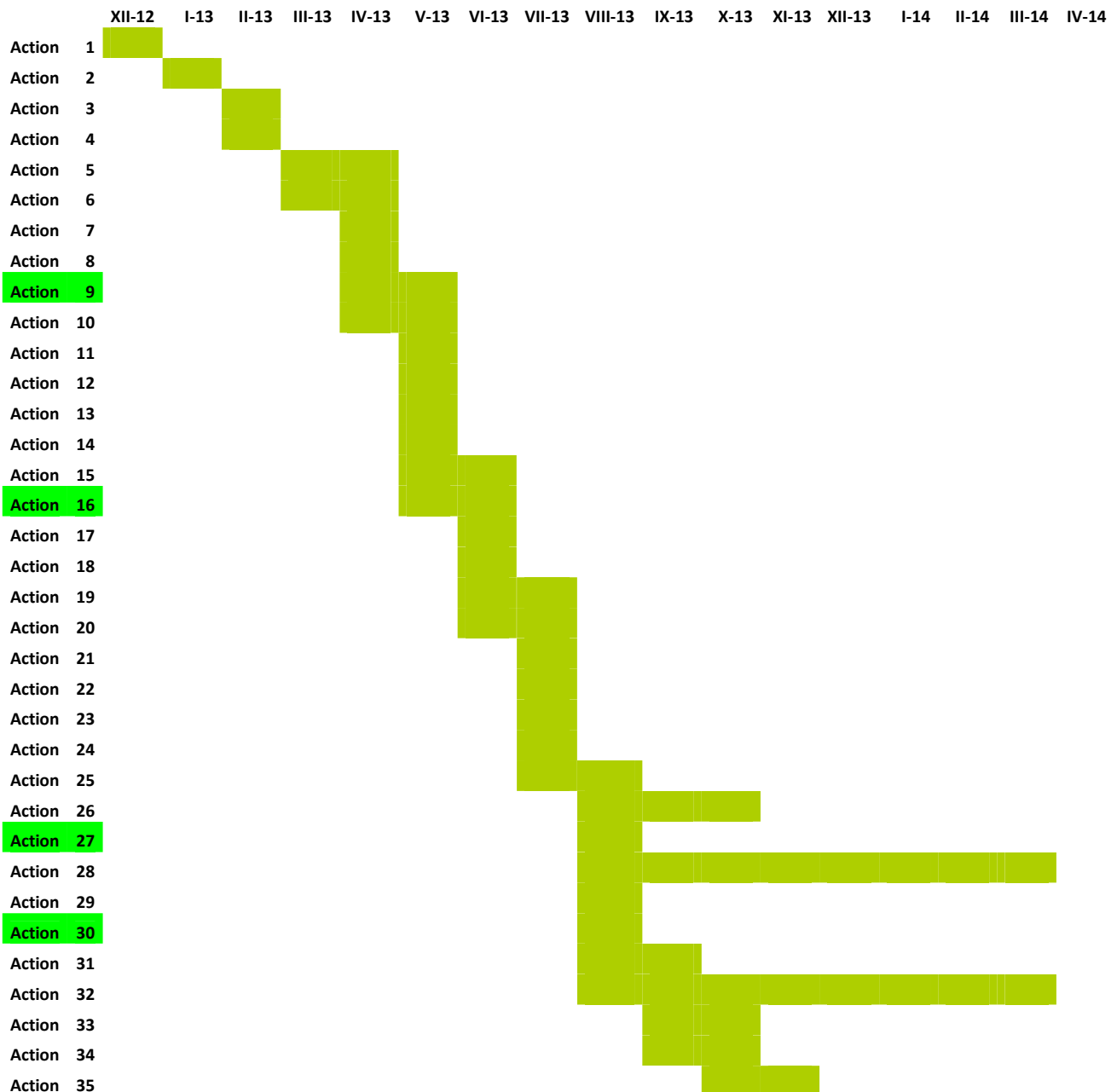
Description: Deployment of national aplication and its interconnection with AP. Necessary configurations on the network level.

Important Milestones / Events

1. 12/12/2012 Project start
2. 10/05/2013 AP functional in acceptance. Status meeting with contractor.
3. 13/06/2013 Gap analysis and national specifications ready. Meeting with health insurance companies.
4. 07/08/2013 Pilot testing environment available. Meeting with health insurance companies.
5. 01/01/2014 Thorough testing with health insurance companies.
6. 17/02/2014 Acceptance testing.
7. 12/03/2014 AP and national application in production. End of project.

Time plan

Contractor Milestone – 9, 16, 27, 30, 38, 42

	XII-12	I-13	II-13	III-13	IV-13	V-13	VI-13	VII-13	VIII-13	IX-13	X-13	XI-13	XII-13	I-14	II-14	III-14	IV-14
Action 1																	
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A.4. Methodology

i.   Methods of implementation;

Methodology for Objective 1:

Network setup will be carried out according to security standards. The AP servers will be placed inside separate DMZ network. The hardware resources will be setup with redundant parts, or quick responses for repairs in order to ensure high availability of the AP. Deployed servers will be included in automatic backup procedures.

All software in acceptance environment will be installed and configured by external contractor technical experts, with participation of UDZS employees, who will later run the AP. This will provide hands on experience for the employees. Training in necessary procedures and respective manuals will also be provided to UDZS by the contractor.

Methodology for Objective 2:

Adaptation of software module will be carried out according to the waterfall model by the contractor, who has developed the module. Analysis, design and part of the implementation have been already carried out, but have been stopped due to prolongation of transitional period and expected changes. Since changes are expected in the EESSI specification and software, gap analysis will be carried out first to identify required implementation changes. After the changes are agreed, further work will continue according the waterfall model.

Methodology for Objective 3:

In agreed national architecture, UDZS and its national application serves as single central point for message transfer, processing and transformation. All national messages are thus sent via national application. Health insurance companies will communicate with NA using messaging system and national versions of electronic documents. For cases of small exchange volumes, or while the internal systems of health insurance companies are still in development, institutions will have the option to use the portal solution (in principle similar to WEBIC), which will allow the institutions to process EESSI agenda using web access. Both options will be processed centrally by the NA backend.

The portal solution and messaging system will be developed in close cooperation with health insurance companies. Iterative approach with testing will be adopted, feedback from institutions will be taken into account in next and larger releases.

Methodology for Objective 4:

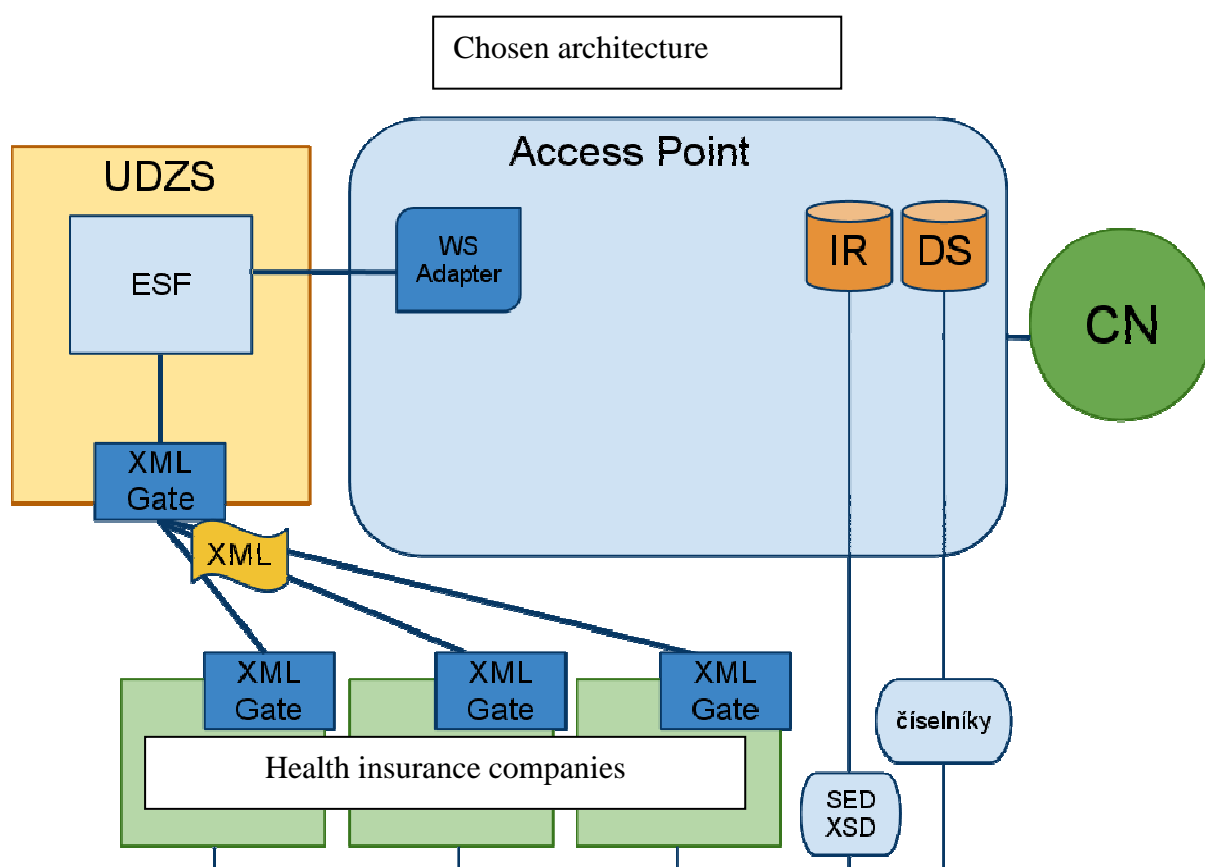For testing, iterative approach will be used. First, only basic functionality will be tested, after the basic functionality is verified, larger parts will be tested. The testing environment will be provided to the health insurance companies as soon as it is available.

ii.   reasons for the proposed methodology;

Objective 1: High availability and reliability of AP is required in order to service EESSI message

exchange. Security is important because of character of exchanged and stored data.

Training in all activities for access point installation and configuration and hands on experience will allow UDZS to maintain and operate the AP internally, the assistance of contractor will ensure correct and professional setup of all components.

Objective 2: Stated approach was chosen in order to save knowledge and implementation efforts which have already been carried out, and also corresponding cost.

Objective 3: Architecture was chosen in order for UDZS NA to serve as a shielding interface between the international EESSI environment including AP and national environment. Portal solution was adopted to make the transition process easier, and allow processing of low volume agenda, where advanced solutions are too costly.

Objective 4: This approach will be used in order to identify the issues and problems as soon as possible, without having to rebuild the whole solution later. Testing environment will be used by institutions to adapt and test their internal systems.

iii. how the project intends to build on a previous project or previous activities

Objective 1: Connectivity to sTesta has been established. Experience from previous temporary installations of network services (dns, ntp) and NDS will be used.

Objective 2: Changes will be incorporated to the partly developed module based on gap analysis, which will be carried out first, to save previous investments.

Objective 3: Portal solution was already developed to a larger extent. Further implementation will

be done in iterative fashion based on feedback from UDZS and health insurance companies. Messaging system will be made available to health insurance companies based on previous common agreement and/or changes agreed in the evaluation phase.

iv.   procedures for internal evaluation;

State of the project will be monitored on the monthly basis. Monthly status reports will be proposed to Administrative board and Board of Supervisors of UDZS.

Work progress of the contractor will be evaluated on meetings of UDZS and contractor, determined by milestone dates in the work plan.

Work carried out by health insurance institutions, mainly in connection with testing, will be monitored operatively, in order to ensure common progress. In case any serious problems arise, these will be handled at the level of Crisis Management meeting, according to existing „Agreement on communication in the EESSI Project" between UDZS and health insurance companies.

v.   level of involvement and activity of other participants in the project;

The project is managed by UDZS, who is therefore the coordinator of the project. Mainly two departments of UDZS will be involved in the project. External contractor will be involved to a high degree in areas where technical expertise is required. Health insurance companies will actively participate on the project, giving feedback to proposed specification and solutions while developing their internal systems or changes. Partners from foreign countries will also be involved in the project in the last phases of testing.

vi.   role of each participant;

UDZS manages and coordinates the project, defines business requirements for development and consults them with health insurance companies, supervises the work of the contractor and is actively involved in testing and in AP preparation.

The contractor prepares the AP for operation in the testing environment, trains internal staff of UDZS and ensures that the AP is properly installed in production environment. The contractor is responsible for technical and business analysis, specification and application development in objectives 2 and 3, and participates on testing.

 Health insurance companies give feedback to proposed specifications and solutions, agree on common solutions and activities, and participate to a large extent on testing and testing feedback.

Partners from foreign countries (Czech Republic, Austria) will participate on bilateral testing in later stages of the project.

vii.   team proposed for implementation of the project.

Realization team consist of the following internal UDZS employees:
>   Project Manager (internal)
>   Business specialist (internal)
>   Business specialist (internal)
>   Systems technician (internal)
>   Systems administator (internal)
>   Secretary (internal)

On the side of the contractor, following external roles are expected:
>   Project Manager (external)
>   Business Analyst (external)
>   Lead developer (external)

Developers (external)

Project managers and specialists from health insurance companies are also involved in and participate on the project. However, for this project, health insurance companies are not defined as project partners and no funding is requested for their participation in the project. Every health insurance company has its own project manager, who is a member of national EESSI realization team under UDZS. Also, each health insurance company has its member of the EESSI Crisis Management under UDZS.

A.5. Estimated impact on target groups

The project will to a great extent help implement EESSI nationally under APSK02. It will improve the software support for tasks performed in agenda of UDZS in relation to EESSI. It will increase the effectiveness of information exchange with national and international partners. The project will also provide the possibility of shortened time needed for handling a case, including the possibility for quick synchronous online communication. The project will considerably lower the cost of resources needed for paper exchange when EESSI goes operational. It will also allow to keep the recent level of staffing, even though the volumes of information exchange are continuously rising. The project also ensures all aspects of operation of the access point APSK02 by UDZS, in order to successfully support the preparation and operation of the EESSI project in the whole health sector in Slovak Republic. Staff responsible for operation of AP will be prepared to maintain and administer the AP, and will be able to respond quickly in emergency situations.

Health insurance companies will benefit from the project in the sense of receiving necessary support to implement EESSI. When EESSI is operational, it will increase the effectiveness of information exchange with UDZS and international partners, provide the possibility of shortened time needed for handling a case, including the possibility for implementing quick synchronous online communication in the future. The project will considerably lower the cost of resources needed for paper exchange when EESSI goes operational. It will also allow to keep the recent level of staffing, even though the volumes of information exchange are continuously rising.

All institutions involved in EESSI information exchange will benefit in the sense that communication with institutions under APSK02 will be possible and compliant with EESSI standards. This will practically bring the same benefits to partner institutions as it brings to health insurance companies under APSK02.

With faster processing and exchange of electronic data, social security rights of the citizens of Slovak Republic and european citizens will be improved. The personal data protection will be brought to a higher level. The system will serve as a base for further improvement of citizen rights in the future.

A.6. Deliverables, Publications and other outputs

Deliverables					
Deliverable Number	Title and short description	Due date or periodicity	Type (a)	Distribution (b)	WP Ref. (c)
D.1	Manual for DNS and NTP server maintenance	15.02.2013	O	C	
D.2	Manual for access point maintenance and configuration	15.11.2013	O	C	
D.3	Manual for certificate maintenance	15.12.2013	O	C	

D.4	Updated document "Analysis and design"	15.06.2013	Sp	C	
D.5	Messaging system specification document	15.06.2013	Sp	C	
D.6	Agreement on updated "Analysis and design" with health insurance companies	15.06.2013	O	C	
D.7	Testing scenarios for portal solution	25.01.2014	Sp	C	
D.8	Testing scenarios for internal solution ESF	25.01.2014	Sp	c	
D.9	Other testing scenarios (for directly communicated agenda of health insurance companies and other services)	25.01.2014	Sp	C	
D.10	Application software for portal solution	12.03.2014	O	C	
D.11	Application software for adapted internal module – ESF	12.03.2014	O	C	
D.12	Application software to support national message exchange (messaging system)	12.03.2014	O	C	
D.13	Deployment of AP acceptance	10.05.2013	O	C	
D.14	Deployment of AP production	15.12.2013	O	C	
D.15	Deployment of national application (testing)	12.03.2014	O	C	
D.16	Deployment of national application (production)	12.03.2014	O	C	

A.7. Added value of the proposal

The proposed project aims at making EESSI reality in the health sector in Slovak Republic. We believe that being ready for EESSI is the most important goal.

Provided testing environment and several repeated testing phases will allow institutions to intensely test and develop their internal solutions for national EESSI operation.

Testing phases will ensure robustness and correct operation of underlying national software systems and as a side-effect also the software provided by the Comission. This will allow for seamless operation of EESSI in production.

Bilateral testing with partners who have large exchange volumes with UDZS will ensure that the processes of message exchange and its impact on business processes are well and equally understood.

A.8. Multiplier effects

• The systems developed in the project will be developed in extensible fashion. In the future, it will be possible to add other flows/cases for new business processes, without much effort. This will allow for faster and flexible changes inside the EESSI system.

• The developed systems will allow for "new-born" health insurance agencies to be easily connected to EESSI system.

• Expected online synchronous exchange of small identification information in the future will be possible based on developed systems.

• The system will be ready for higher computational demands later in the EESSI operation, related to higher citizen movement rate.

• It will be possible to use the national messaging system for other communication between

UDZS and health insurance companies. This will increase security, reliability and simplicity of message exchange.

• Available connectivity between access points could be used in the future to communicate with two other access points in Slovak Republic.