National report

Bulgaria

Strengthening of the capacity of the institutions from selected EU countries in the field of implementation of Regulation (EC) No 883/2004 and 987/2009 and introduction of the electronic data exchange (EESSI)

Content:

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1. Introduction:

This document represents the national report for the Republic of Bulgaria within the framework of the project for "Strengthening the capacity of the institutions from selected EU states in the area of the implementation of Regulation no. 883/2004 (EEC) and Regulation no. 987/2009 (EEC) and the implementation of electronic data exchange in the area of social security.

As stated in the report of the Czech Republic, the realisation of this project is based on, amongst other things, Regulation no. 883/2004 (EC) from 29th April 2004 on the coordination of social security systems and Regulation 987/2009 of the European Parliament and Council (EC) from 16th September 2009 which imposes the obligation of all EU member states to secure international electronic data exchange in the area of social security within the framework of the entire European network.

The electronic data exchange should gradually completely replace paper communication between the institutions of the member states. Every member state accesses the EESSI system via a so-called Access Point which consists of a national and an international part. An Access Point is understood as being any electronic contact point designated by the appropriate organ of the Czech state for one or more of the areas of social security stated in Article 3 of the basic regulation.

The Bulgarian institutions responsible for the implementation of the coordination of social security regulations have started preparation for the EESSI since 2008 when the national architecture of APs was decided. It was also decided then that the 4 APs will finance the initial preparation at national level by themselves, searching also for possibilities for financing from other sources – e.g. ESF programs, etc.

1.1 The national organizational structure description

Functions of national institutions as per Regulation 883/2004 and 987/09 (as identified in the Master Directory):

The competent authorities for Bulgaria are:

Minister of Labour and Social Policy – for all pensions, cash benefits and applicable legislation

Minister of Health – for the medical care – benefits in kind

The competent institutions are:

Ministry of Health – for medical care – benefits in kind – financed out of the state budget

National Social Insurance Institute – for all cash benefits (except for family benefits) and pensions from the state social insurance

National Health Insurance Fund – for medical care – benefits in kind – financed out of the contributory sickness insurance

Social Assistance Agency – for family benefits

The private pension companies administering pension funds for compulsory supplementary pension insurance

National Revenue Agency – designated body for determining applicable legislation

The Access Points are:

The areas of social security of Regulation 883/2004 will be covered by four APs: the National Revenue Agency (NRA – AP BG 03), the National Social Insurance Institute (NSII – AP BG04), the National Health Insurance Fund (NHIF- AP BG01) and the Agency for Social Assistance (ASA – Ap BG 02).

AP BG 01 - AP for all the benefits in kind, therefore it is the AP not only for the benefits administered by it but also the AP through which the MH and the ASA/Agency for disabled persons will receive and send SEDs

AP BG 02 – AP for the family benefits

AP BG 03 – AP for applicable legislation

AP BG 04 – AP for all cash benefits (with the exception of family benefits) and pensions, therefore it is the AP not only for the benefits administered by it but also the AP through which the pension insurance companies administering pension funds for compulsory supplementary pension insurance
 will receive and send SEDs

Each of these four AP decides how to get prepared for a full EESSI accessible status but there is overall coordination by the Ministry of Labour and Social Policy which is aiming to provide connections among the APs and the other competent institutions and full national exchange of data necessary to operate the EESSI at EU level. The existing systems of the 4 APs and of the other competent institutions which must be connected to the AP solution differ both technologically and materially (the data content, functionality and integration requirements).

The MLSP is in the process of elaborating a national project for establishment of a system for exchange of information among the APs and the other competent institution necessary for generating and replying to SEDs and processing business flows within EESSI.

The National Health Insurance Fund (NHIF)

The National Health Insurance Fund (NHIF) is the competent authority for benefits in kind for sickness and maternity within the scope of the Health Insurance Act (HIA). The fund comprises of 28 Regional Health Insurance Funds (RHIF) distributed territorially in the district centres and the Central Headquarters of the NHIF located in Sofia. The NHIF in its capacity as AP will provide services

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to both the Ministry of Health (MH) and the Agency for the Disabled Persons (ADP)within their competences.

SOCIAL ASSISTANCE AGENCY

Social Assistance Agency (ASA) was set up within the structure of the Ministry of Labour and Social Policy (MLSP) to implement the state policy in the area of social assistance.

The agency is run and represented by its Executive Director. The Executive Director leads, coordinates and controls the carrying out of the overall work of the agency and its relations with other authorities, organisations, etc.

An inspectorate is set up to support the work of the Executive Director. The inspectorate reports directly to the Executive Director and carries out specialized control over the legal enforcement of the legal acts on social assistance.

The Directorate Internal Audit, the data protection official, the secretary general and the financial controller report directly to the Executive Director.

The Executive Director sets out the functions and delegates powers to his/her two deputies by an order.

ASA
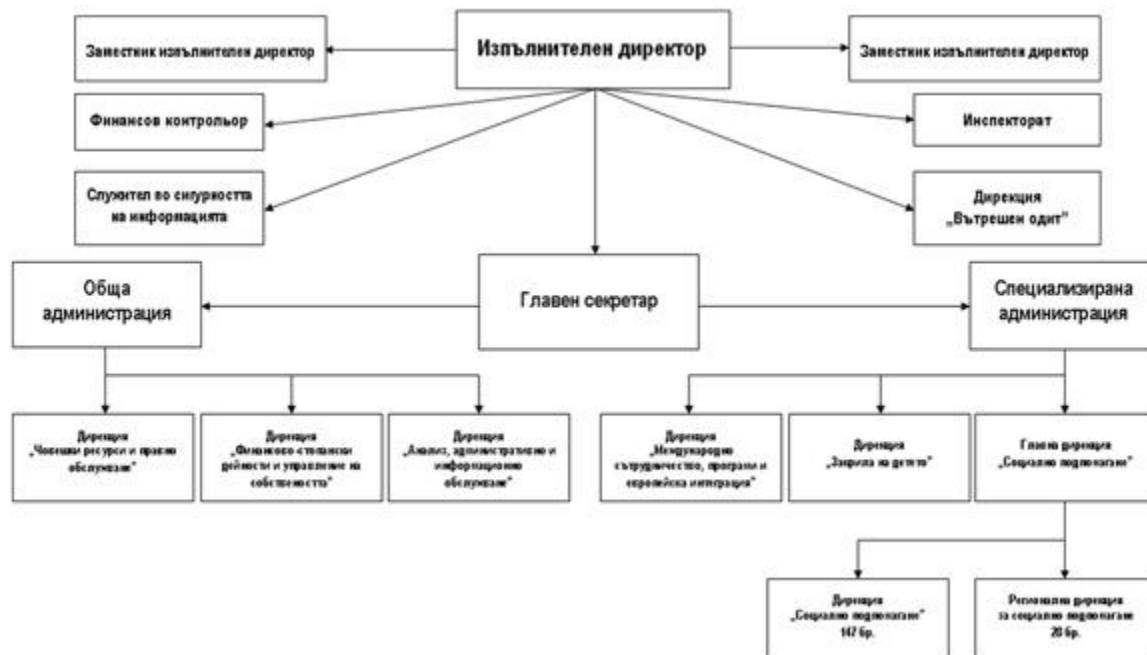
Deputy Executive Director	Executive Director	Deputy Executive Director
Financial controller		Inspectorate
Data protection official		Directorate Internal Audit

| General administration | Secretary | Specialized administration |

Directorate Human Resources and Legal Services		Directorate International Cooperation, Programmes and European Integration
Directorate Finance and Economics And Property Management		Directorate Child Protection
		Directorate General Social Assistance

Directorate Analysis, Administrative and Information Services

Directorate Social Assistance, 147 employees
Regional Directorate for Social Assistance, 28 employees

1. Regional Directorates for Social Assistance (RDSA) and **Directorates Social Assistance** (DSA) carry out in the following activities in the respective region:
➢ the state policy for social assistance;
➢ child protection;
➢ rehabilitation and social integration of the disabled.

The territorial offices of the ASA carry out the following activities in the relevant municipality:
➢ the state policy for social assistance;
➢ child protection;
➢ rehabilitation and social integration of the disabled.

National Revenue Agency

The main implication of the determination of the legislation applicable in Title II of Regulation (EC) No 883/2004 is that a Member State is defined where the social security contributions are payable.

In Bulgaria the National Revenue Agency (NRA) which is a specialised state body directly reporting to the Ministry of Finance sets out and collects claims by public bodies on taxes and **mandatory social security contributions.** The agency keeps a registry of taxable people and of people employed under a labour contract and it creates and keeps a database of the insured people necessary for its work and for the purposes of the mandatory social security system.

In this respect the NRA is the institution designated by the competent authority of Bulgaria to implement Title II of Regulation (EC) No 883/2004.

The NRA is recorded in the database under Article 88 (4) of Regulation (EC) no 987/2009 (EESSI directory) as a competent institution with identification number (code): 131063188 designated to apply the overall Title II of the basic regulation (Determination of the legislation applicable).

The NRA is one of the access points in relation to the electronic exchange of data under the European regulations on the coordination of social security systems of the EU Member States.

National Social Insurance Institute

The National social insurance institute (NSII) is the competent institution within the meaning of the coordination rules for the judgment on the entitlements and the payment of cash benefits for the risks in the matters covered in Regulation 883/2004 including sickness benefits; maternity and equivalent paternity benefits; invalidity benefits; old-age benefits (retirement pensions); survivors' benefits (a survivor's pension); benefits in respect of accidents at work and occupational diseases; death grants and unemployment benefits.

The NSII is structurally organised to consist of Headquarters in Sofia and 28 territorial offices (TO) in the district territorial and administrative centres in Bulgaria. The structure of the Headquarters includes a Governor, Deputy Governor and functional directorates carrying out methodological guidance and control of the activities carried out by the NSII including Directorate European Regulations and International Contracts with the following duties:

- methodological support of TA and control over the implementation of Regulations 883/04 and P987/09 and of bilateral international agreements in the area of social assistance for the risks which fall within the competence of the NSII as a designated competent institution;
  - practical activities related to providing services to stakeholders in the area of short-term insurance, data exchange and coordination between foreign competent institutions and the territorial offices of the NSII;
– practical activities related to the assessment of the entitlement to pensions of people living in other countries and
- payment of benefits and pensions to pensioners living abroad.
The functions pertaining to the assessment of the entitlement and the payment of benefits and pensions to people living in Bulgaria entitled to pensions based on length of service in other countries are carried out by the territorial office of the NSII in the region in which the person is domiciled.

1.2   The accepted AP resolution (relevant spectrum)

As stated in p.1.1. Bulgaria will have 4 **Access Points to cover t**he areas of social security of Regulation 883/2004. The APs are: the National Health Insurance Fund (NHIF- AP BG01), the Agency for Social Assistance (ASA – Ap BG 02), the National Revenue Agency (NRA – AP BG 03) and the National Social Insurance Institute (NSII – AP BG04).
Their functions are described above and their codes could be found in the Master Directory, as well as these of the other competent authorities, institutions and liaison bodies.

The electronic data exchange in the area of social security is carried out via access to the European network for data exchange between the public administrations of the EU Member States – sTESTA. sTESTA aims at ensuring fast and smooth international data exchange via the EC and this network is not intended to connect the national institutions in Bulgaria. Connectivity of the 4 access points to sTESTA is available at present and is carried out via the National Network of the State Administration (NNSA).
The National Architecture is:
▶   Based on National Government Communication WAN in Bulgaria. Each AP is connected to the NGC WAN;
▶   Connected to sTesta network, based on IP addresses, different for each organisation
▶   Based on local solution per each AP.

National Health Insurance Fund
A decision was made at a national level to set up an access point in the NHIF. With a view to testing and rolling out EESSI at the NHIF and the other two competent institutions, the relevant technological infrastructure for the exchange of Structured Electronic Documents (SEDs) and identification and implementation of the relevant business processes (flows, SEDs and data, etc.) should be "upgraded". By May next year the NHIF and the other competent institutions will have to solve a wide range of important issues of different nature related to the development, installation and implementation of the EESSI model including the following ones:

Technical issues related to the software and technical means, availability (accessibility), security, productivity, flexibility and scalability.

Legal issues related to compliance with the applicable legislation in the EU and Bulgaria on the handling and transfer of sensitive information related to payments, personal data, etc.

Organisational issues related to the provision of funding, human resources, workflows, procedures, etc.

Future development, integration in national applications, enhancing the processes, etc.

Agency for Social Assistance

Installation of NDS in the ASA is completed, the system is installed and WEBIC application is tested for performance. Tests are made and some drawbacks of flexibility are noted. It also runs a training on implementing the new information system, aiming to facilitate data collection in SEDs, as well as keeping them in the future.

National Revenue Agency

The installation of NDS was implemented and configured in the NRA in compliance with the requirements and installation documentation as well as the installation software packages. In addition, a test environment was installed and configured for work with the application WEBIC provided by the EC for electronic exchange of documents. The operating system of the environment is RHEL 5.4 .

National Social Insurance Institute

The decision for the setting up of an access point was based on the above description. Given the opportunity to have access from any point in the NSII system, the hardware and software arrangements were made. 3 main installations were implemented following the guidelines of the EC, i.e. NDS, AP_RI and WEBIC. The last system is basic in terms of access from the relevant workstations in the NSII system. The installations were carried out via the software provided by VM Ware which allows for virtualization and follow-up redundancy. The operating systems comply with the environment requirements of Linux Red Hat v.5.4. Thus 3 licences were installed on 3 virtual machines each of them complies with the requirements of the technical documentation of the EC depending on their functions. It is worth pointing out that the installation of the majority of products from scripts was fraught with errors recorded in the log files of the systems. Some of the errors are fatal and they are addressed and removed by the support services. Given the overall installation of the environment, it should be considered that this environment is very complex and the options were not documented clearly enough for the teams installing the environment. In addition, given the huge number of installed and adjusted products, even in case of automatic installations, the latter are not stable and smooth enough. As a result, given the complexity of the environment, the removal of an error is not possible without support from the EC. For that purpose the designated website of JIRA is used where issues related to the installation, configuration, the installation of the environment and the operation of the system can be recorded. Unfortunately it is obvious that there are too many opened and pending cases at present, published by the different testing countries. The discussions are held in treads and there is a wide range of tools for the description and following chronologically of a given issue. The published documents on the FTP website of the EC also present a problem as it is difficult to track a given version, new versions or amendments to current documents.

1.3 Grounds for the accepted resolution

National Health Insurance Fund

The following options for connection with EESSI are available:

- the use of WEBIC (option 1)
- direct integration of national applications into EESSI via ICD2 interface (option 2)
- own programme via Access Point (option 3)

As the NHIF does not plan to develop its own system at present, the future development will most likely be based on Siemens solutions.

Agensy for Social Assistance

Implementation of the EESSI system is associated with a better communication and information structure of the ASA. Within the country we are working on connection between the central office and the regional offices. This reflects on the information system of the agency, which is currently decentralized. Connectivity will enable sharing of data and preparation of the centralization in the future, and will allow to run this application WEBIC from anywhere in the country when needed. It should be noted that the Agency for Social Assistance has 147 territorial devisions in the country.

National Revenue Agency

The process of installation and configuration of the electronic exchange environment at access points suffers from certain lack of clarity as to the accurate and clear description of the parameters in the configuration files.

As there are attempts at overall and automatic installation of the environment, whenever a problem occurs, it is not clear how to find the cause of the problem – a description of errors when messages are sent or recording of information in log files. In addition, WEBIC is an external system and there is no description available about the monitoring of the system in terms of hardware and software – critical parameters of the operating system, steps in case of data loss and crash recovery procedures.

National Social Insurance Institute

▸ 4.NSII WAN/LAN Infrastructure

▸ 4.1 NSII has 28 regional offices and more than 150 individual working places in the whole country

▸ 4.2 LAN infrastructure is centralized in Sofia, but there are disaster recovery center, that enable safe functionality without interrupt.

▸ 4.3 Each regional office is connected to the central and disaster recovery node.

▶ WAN infrastructure is based on the different providers: National Government Networks, leased lines from a telecommunication company and Internet connections for some working places. All network connections are encrypted.

Considering the information in item 1.2., it should be noted that different stages of implementation and installation of the system should be carried out. The system as a whole is developed and functioning under a fixed version of Linux. That in turn creates obstacles to the installation of the last versions and poses the risk of having the current version stopped being updated by the manufacturer at any time. Moreover the use of this version requires a specially trained team to handle the solution and the software. The conclusion is that one more software programme is installed at the organisations where different software programmes operate and considerable efforts should be made to handle it. The efforts include planning a specific training and keeping a team of administrators able to fulfill the requirements of the EC. Moreover, given its specificity, the software should be accessible by the relevant work stations. It goes without saying that this is possible given the infrastructure of the IS at the NSII. Difficulties occur at the security level where access to the system, WEBIC in particular, should be determined. The WEB application is accessible via a specific browser, i.e. Firefox, which in the Windows-based system of the NSII requires installation and configuration at workstations, compatibility checks, etc. The very location of the system in an address area creates problems as it should be accessible both in the EC's network and by the users without any infringement on corporate security.

1.4   The risks identified in the course of accepting the national resolution decision

The installation of the EC's system poses several risks:
First, it poses the risk of the unfinished system by the developing organization. That creates difficulties in terms of planning its use in the future in direct mode. Such is ICD2+ and it should be noted that interfaces are difficult to use. Indeed the complexity results from the insufficiently detailed description of the service; despite the number of available documents on its operation, there is no simple example of how to implement it or any WSDL scheme of the service. What is also unclear is the outcome of the commitment taken by the EC to ICD5 interface which is a very useful tool and enables to reach the functionality of WEBIC at a programme level only by circumventing GUI of WEBIC. However, the implementation of this service at a later stage would make it difficult to test and handle it due to the reduced time limits to the launching of the system for actual operation.
The insufficient attention paid in principle to this system by all Bulgarian testing organisations also poses a real risk. There is no vision and no sufficient commitment and allocation of resources and time in the relevant departments to favour the successful project implementation at a national level.

1.5   Financing (possible for particular AP)

The installation, configuration and testing of the system is currently financed by own resources. Financing was necessary for the hardware and software equipment. Funds will be needed to organise training for specific products envisaged in the environment. Funds will most likely be necessary to

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implement SEDs in the DBMS of the NSII via the infrastructure and state-of-the-art software products.

At present a module on data exchange necessary for the business flows at a national level is being added to the project for an integrated information system in the Ministry of Labour and Social Policy (MLSP).

1.6 The project administration (possible for particular AP)

National management

The proposal for the national solution was accepted at the level of the inter-resort Working Sub-Group for the Coordination of Social Security and a decision was subsequently reached by the management of the Ministry of Labour and Social Policy, based on the official statements of the managers of the 4 APs – NHIF, ASA, NRA and NSII.

In order to secure the management and coordination of the preparation activities of the competent authorities and institutions and other parties concerned, an inter-institutional group for electronification has been established under the responsibility of the Minister of Labour and Social Policy. Unfortunately, that group has ceased its formal existence and its functions are taken over by the inter-resort Working Sub-Group for the Coordination of Social Security.

The overall national management is provided by the Ministry of Labour and Social Policy – its department for coordination of social security. Therefore the MLSP took over also the project coordination for Bulgaria for the current project.

Project management for the individual AP

The NHIF AP:
Overall project implementation in AP is led by Deputy Governor of the NHIF.
ICT Directorate - Projects Department administers and coordinates all activities of the project, and for this purpose in different stages interact with other departments and specialized units in the NHIF, competent in their respective fields:
the "Budget"
Medical activities "- Coordination of social security systems, cat.
Commission for reimbursement to emergency medical and / or required treatment in another Member State of the EC or EEA or Switzerland
Commission for permits for planned treatment in another Member State (E112 or S2), as well as experts 28 RHIFs.

The ASA AP:
In the ASA there are 3 project members: Mrs. Pravda Ignatova – coordinator and manager, and two experts - Mrs Maria Stambolieva and Ms. Teodora Dodeva. The main duties of the experts are to participate in elaboration of the reports with description of the national system, participating in thematic workshops, identifying the problems and preparing discussion papers, dissemination of the project recommendations.

The NRA AP:

The employees of the NRA engaged in the implementation of the project are designated by the Executive director of the agency. The experts tasked with the project are Dimitar Boychev - employee in "Tax and social insurance methodology" Directorate and Boyko Karabelyov - employee in "Information systems" Directorate. To fulfil the main activities of the project the abovementioned experts are supported by employees from "Coordination of the projects" Directorate, "International affairs" Directorate, legal advisors and if necessary by employees from other departments in the NRA.

The NSII AP:

Project management at NSII is provided by working group appointed by the Governor of the NSII. The main functions belong to Directorate European Integration and International Agreements and General Directorate Information Systems. Directorate European Integration and International Agreements defines business processes and provides SEDs identifications. It is dealing with analyses of flows, preparation of practical examples for pilot testing of data exchange through EESSI. Experts from Directorate European Integration and International Agreements take part of EESSI testing.

General Directorate Information Systems plays leading role for the IT side and installation of hardware and software modules. It is also providing links of working places at the local offices within the country to the application. Next to this General Directorate Information Systems develops the national system component (under the aspices of NSII) for SED information basis.

All activities for EESSI implementation are reported to the ECom, Ministry of Labour and Social Policy – the relevant Unit responsible for the EU coordination regulations and the Governor of the NSII.

1.7   The national resolution time planning – FI, BG, CZ, HU

BG

National Health Insurance Fund:

As a tested access point the NHIF should undergo three stages of development: test, transition and productive use. A time schedule was drawn up in the early 2011 which is included in the National Action Plan. Unfortunately a delay can be observed which we will have to make up for in the forseeable future. The table below presents the main actions and deadlines in the time schedule:

	Preparation of the Access Point (NHIF)	
No	**Main actions**	**Expected date of implementation**
	-	
6	Provide premises for the implementation of AP	04.2011
	- prepare for testing	

	- trial installation of AP_RI	
	- prepare the production environment	
7	Test connectivity with DG EMPL	06.2011
8	Review WEBIC by DG EMPL	06.2011
9	Compliance assessment with the security policy of EESSI	06.2011
10	Comply with the security policy of EESSI and the measures for the implementation of the production-targets	06.2011
13	Define the routing strategy	05.2011
14	Coordination of the review of WEBIC with the institutions	07.2011
15	Provide support to the institutions	02.2012
16	Coordination during system implementation	03.2012

ASA

Main actions	Starting date	Estimated implementation date
Organisational preparations		
Establish business organisation	ASAP	11.2010
Establish AP EESSI team	ASAP	11.2010
Establish AP Service/Help Desk for support towards CIs	ASAP	05.2011
Technical preparations		
Prepare national environments' pre-requisites	Oct 2010	01.2011
Prepare Acceptance environment	Nov 2010	
Prepare Production environment	Dec 2010	02.2011
Rehearsal installation AP_RI	Mid-Jan 2011	03.2011
Install production worthy system (AP_RI or WEBIC)	April 2011	04.2011
Testing connectivity with DG EMPL	April 2011	05.2011
Review system functionality (based on WEBIC)	April 2011	06.2011
Security		
Assessment of compliance with the EESSI Security Policy	ASAP	06.2011
Compliance with the EESSI Security Policy and implementation measures for production purposes		06.2011
Business preparations		

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Perform/Coordinate business: "Flow Attribution to institutions"	ASAP	02.2011
Identifying recipient systems in the competent institutions	Jan 2011	04.2011
Formulate a routing strategy	Jan 2011	06.2011
Coordinate WEBIC review with institutions (in Acceptance ENV)	April 2011	07.2011
Provide support to institutions	Throughout transitional period	03.2012
Coordinate production roll-out with institutions	Throughout transitional period	04.2012
Assessment of compliance with national personal data protection	ASAP	
Compliance with national personal data protection		
Main milestones (important for other Member States to know)		
When will the Access Point be ready for bilateral testing?		10.2011
When will the Access Point be ready to go into production?		12.2011
Which sectors will be served by the Access Point?		

NRA

Technical Preparations

01.2011 Preparing Acceptance environment

01.2011 Install AP_RI

02-03.2011 Testing connectivity/WEBIC/ICD2 with DG EMPL

02-03.2011 Bilateral testing with partner countries

04-12.2011 Preparing PROD environment

Business preparations

31.01.2011   Analysis of SED regarding the information needed to complete them

31.03.2011   Analysis and description of business processes related to EESSI

28.02.2011 - Analysis of information to be exchanged between the competent national institutions

Preparation for transition to fully EESSI:

04.2011 system installation

04.2012 Staff training

NSII

Organisational preparations		
Establish business organisation	**08.2010**	**10.2010**

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Establish AP EESSI team	**09.2010**	**10.2010**
Establish AP Service/Help Desk for support towards CIs	**10.2010**	**03.2011**
Technical preparations		
Prepare national environments' pre-requisites including training on the new environment	**11.2010**	**12.2010**
Prepare Acceptance environment		
Prepare Production environment	**11.2010**	**11.2010**
Rehearsal installation AP_RI	**03.2011**	**03.2011**
Install production worthy system (AP_RI or WEBIC)	**04.2011**	**04.2011**
Testing connectivity with DG EMPL	**04.2011**	**04.2011**
Review system functionality (based on WEBIC)	**06.2011**	**06.2011**
Security	**06.2011**	**06.2011**
Assessment of compliance with the EESSI Security Policy	**05.2011**	**06.2011**
Compliance with the EESSI Security Policy and implementation measures for production purposes	**05.2011**	**06.2011**
Business preparations		
Perform/Coordinate business: "Flow Attribution to institutions"	**12.2010**	**01.2011**
Identifying recipient systems in the competent institutions	**02.2011**	**03.2011**
Formulate a routing strategy	**04.2011**	**05.2011**
Coordinate WEBIC review with insti-tutions (in Acceptance ENV)	**07.2011**	**07.2011**
Provide support to institutions	**02.2012**	**02.2012**
Coordinate production roll-out with institutions	**03.2012**	**03.2012**
Assessment of compliance with na-tional personal data protection	**ASAP**	**05.2011**
Compliance with national personal data protection		**05.2012**

2.   The National Architecture:

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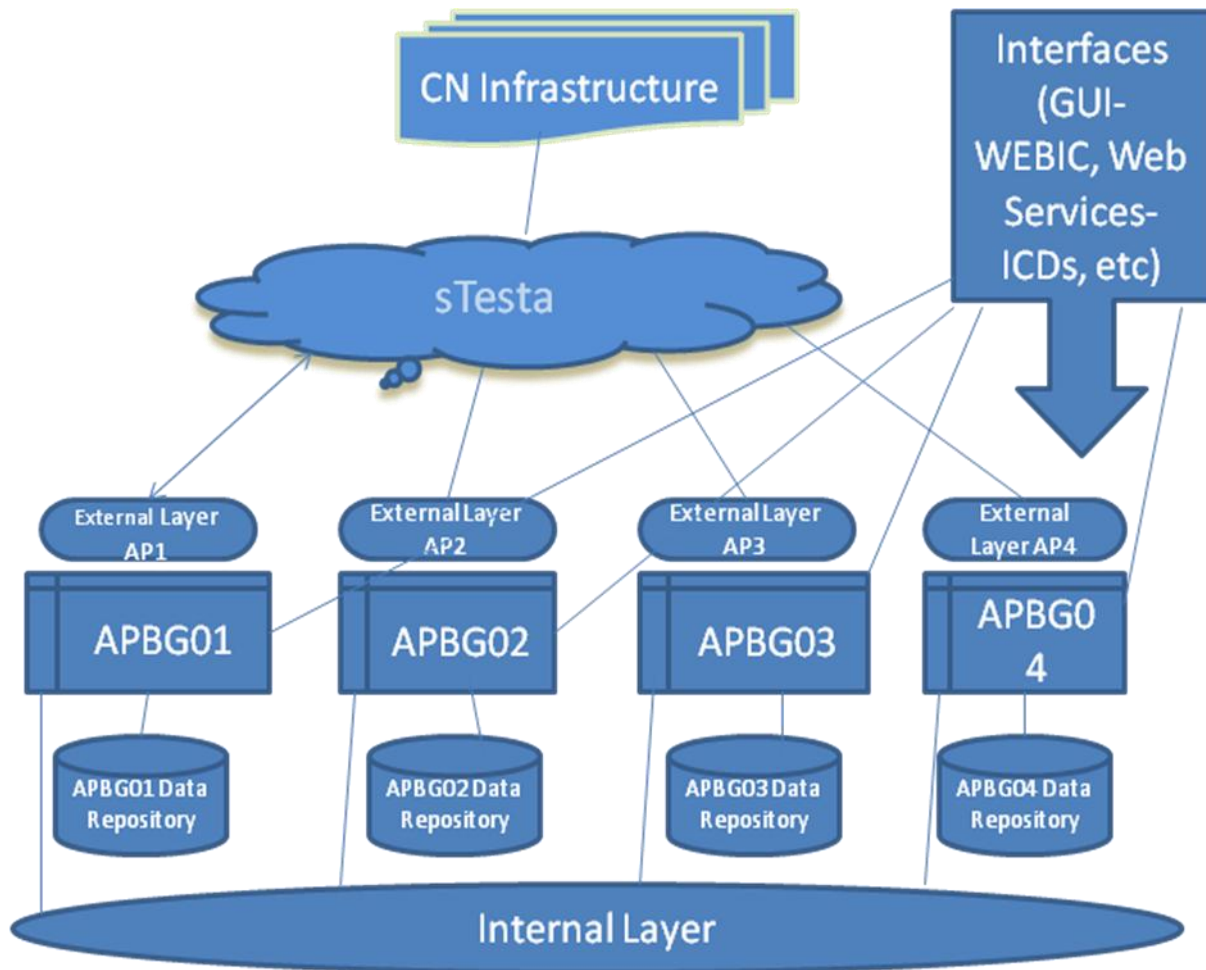
2.1 The AP map

The AP map of the NHIF

The technological infrastructure of the AP in the NHIF is based on the technical requirements and recommendations of the EC and Siemens. 3 servers with the following main parameters will be installed and configured in the local network of the central office of the NHIF:
- NDS server
- AP_RI server
- Webic server:

After the required tests are carried out (including a test mode of operation with other competent institutions connected to the AP), the final configurations will be made, installed as Production Environment and compliant with the requirements for productivity, security and reliability.

EESSI (CN, FTP, MDS)   BG INSTITUTIONS   WEBIC (CI)

FIREWALLED CONNECTIONS

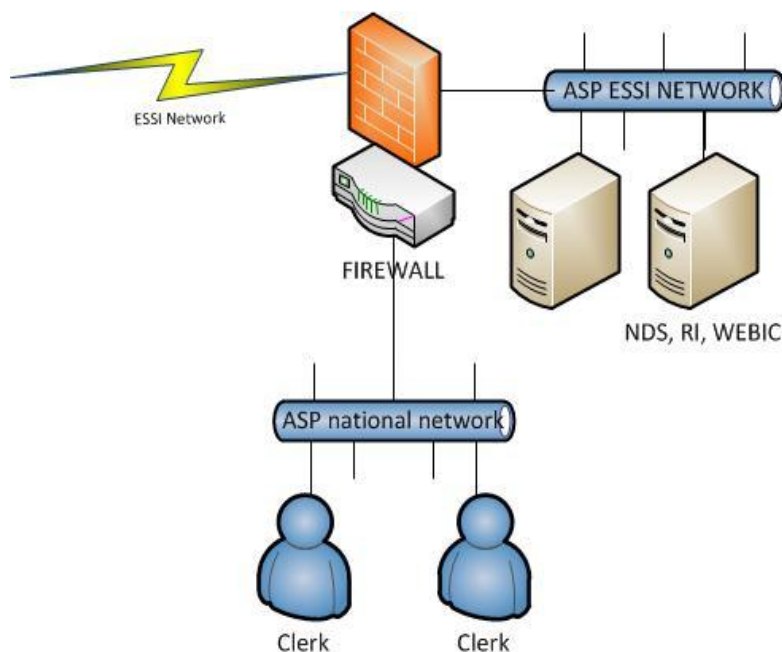AP_WEBIC   AP_ RI   AP_NDS

NHIF LAN
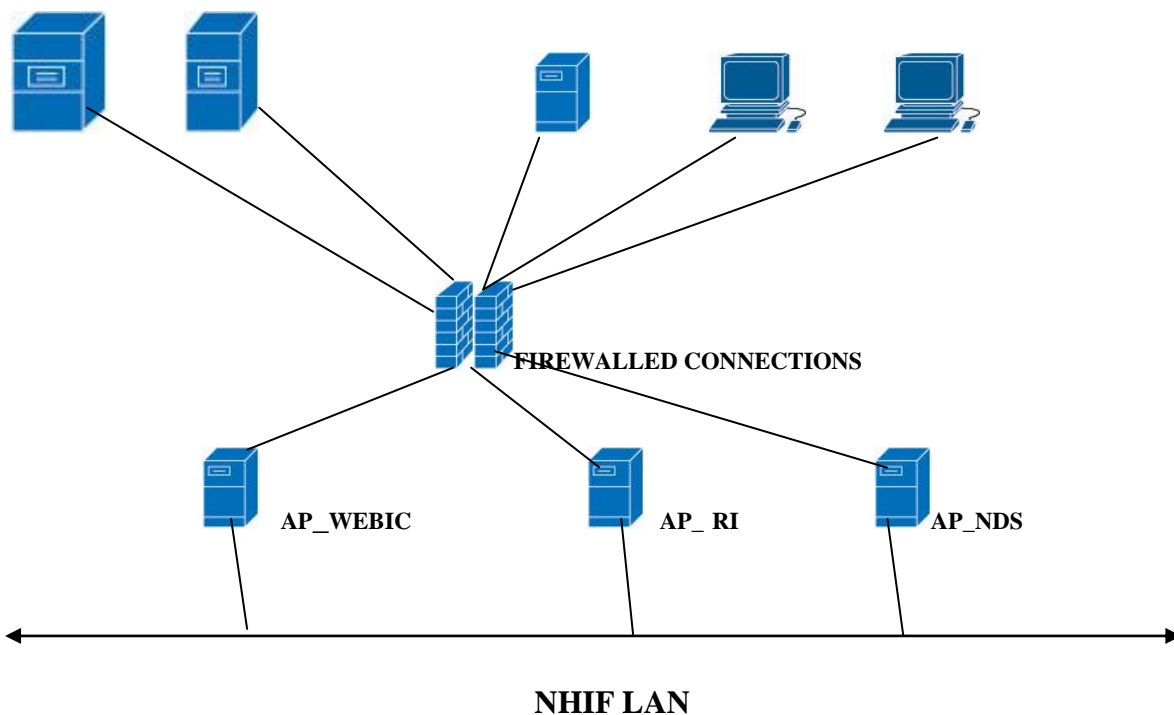
The AP map of ASA

ASA is the AP for family benefits.

At present the ASA has no centralized database for the benefits granted under the Family Child Benefits Act (FCBA). The data collected at the central office of the ASA is statistical and generalized without any personal information on the clients entitled to social assistance. Such personal data is kept only at the territorial directorates. In reality these directorates provide the actual services to people and families in need of social assistance and they play the role of the main organisational unit in terms of practical implementation of social assistance activities and provision of information, if necessary, which can be officially requested by the relevant directorate.

A project financed under Operational Programme Human Resources Development (OP HRD) envisages the development and implementation of information systems and databases servicing the social assistance system and a central database is planned to be completed by the end of 2012.

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The AP map of the NRA

The NRA is an AP in the area of the legislation applicable under the electronic exchange project. NDS and WEBIC will be installed at this stage and they will be configured for access to and data exchange with the EC. The figure below presents the scheme in question.
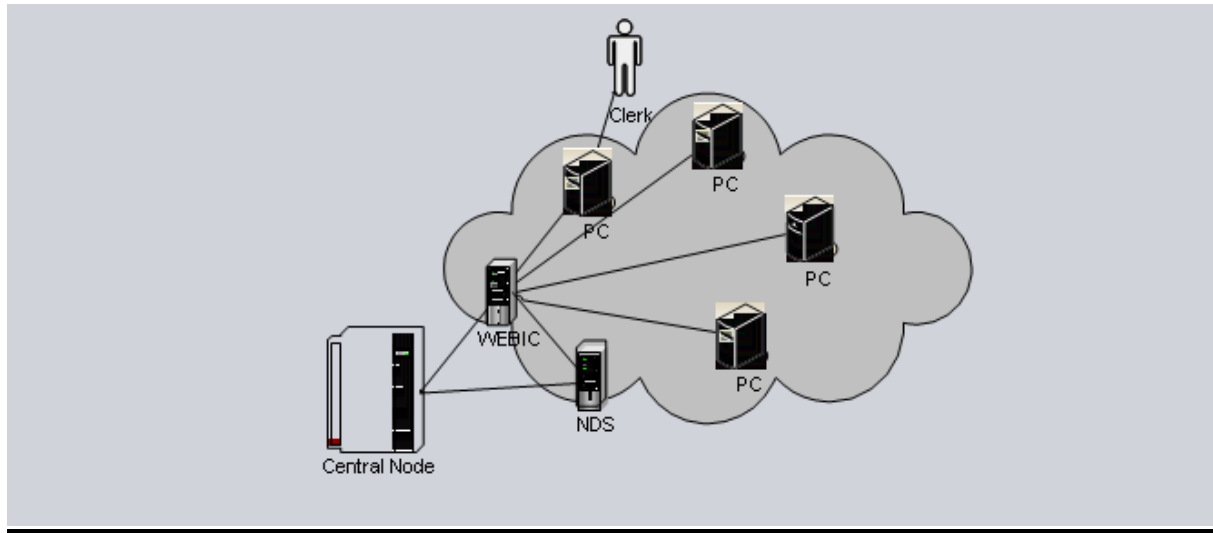
The AP of the NSII

Clerks workstations

AP_BG04 National WAN

AR_BG04 National Applica-
tions, National Data Connectors
(Data Exchange, Web Services,
Data transformation, Data filing,
Transaction writer)

AP_BG04Natio...

ICD2+, etc.
interfaces

WEBIC

AP_RI

/NDS

Firewall System

AP_BG01
(NDS)

AP_BG04(ND
S)

AP_BG04(ND
S)

National Connections between AP

MDS level
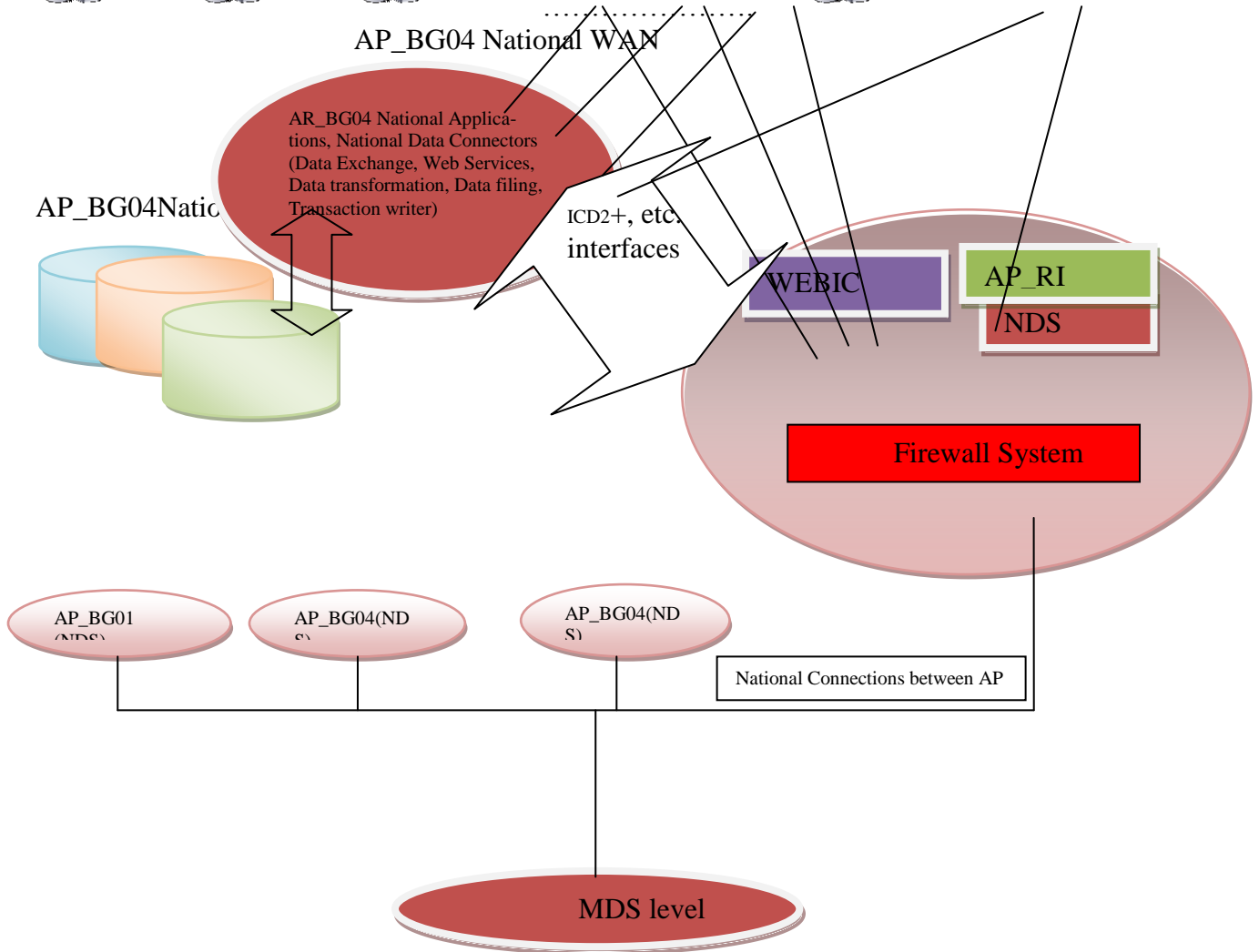
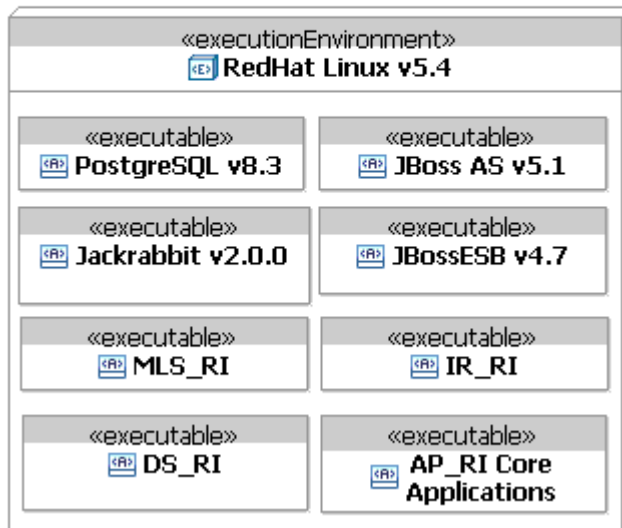## 2.2 The architecture of particular AP (graphics with descriptions)

NHIF

AP will be created in the local network of the central office of the NHIF with secured communication for access to STESTA and the use of a real static IP address provided by the EC. Thus the AP will maintain 4 STESTA connections:
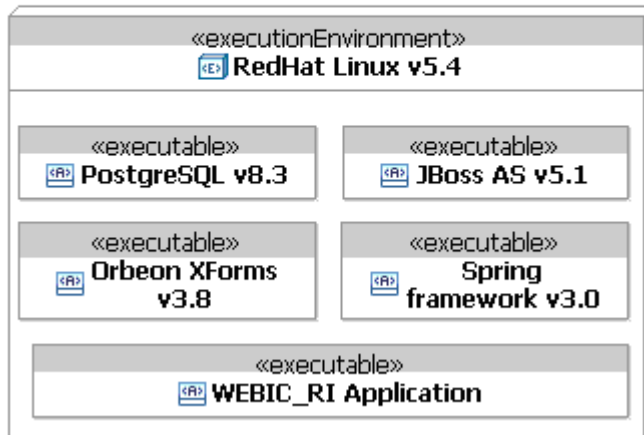
- MDS-to-NDS replications;
- A replication of EESSI Runtime Model (MET output)
- Incoming messages to AP_RI
- Outgoing messages to CN

The table below presents the main software system configurations included in the EESSI documents and in each of the three servers the AP is composed of:
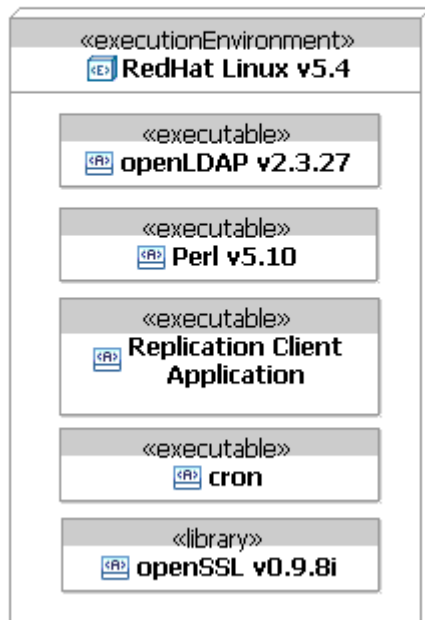
WEBIC_RI Server

«executionEnvironment»
RedHat Linux v5.4

«executable»
PostgreSQL v8.3

«executable»
JBoss AS v5.1

«executable»
Orbeon XForms v3.8

«executable»
Spring framework v3.0

«executable»
WEBIC_RI Application

NDS Server

«executionEnvironment»
RedHat Linux v5.4

«executable»
openLDAP v2.3.27

«executable»
Perl v5.10

«executable»
Replication Client Application

«executable»
cron

«library»
openSSL v0.9.8i

The main focus in the development of the AP architecture in the NHIF will be on ensuring security and protection of the personal data processed:

-   For national traffic the AP should ensure security in compliance with the Bulgarian law.

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-        Security should also comply with the EU Data Protection Directive and provide functionality for mutual identification and authorization.

-        Digital certificates and PKI are likely to be used to achieve these goals.

As stated in item 2.4., the authorities will examine at a later stage the opportunity for integration into a national application and more comprehensive implementation of the EESSI model by 1.05.2012. The NHIF has an Integrated Information System covering the central office, 28 RHIF and over 70 more offices in the country with VPN connectivity.

NRA

Employees will have access to the application for electronic exchange of data on social assistance via a web browser to the server with the installed software programme for electronic exchange located in the central office. Each employee will have an individual username created to enter and operate in the system.

ASA

The AP in the ASA is located behind a firewall and the real address provided by the STESTA network masks the private network where the AP is located. Access is controlled for both users and IP addresses**.**

NSII

The structure of the information system applied in the NSII is based on modern technology. The system is fully centralized and is additionally secured by local servers supporting work with sufficiently fast response. The system covers the territory of Bulgaria and is used in both offices located in district cities and in over 100 offices outside them. The system connectivity is ensured by the state administration network (National ATM Network of the State Administration) and hired lines to every extended point. Connectivity is carried out via WAN equipment owned by the NSII.
Connectivity allows all territorial offices of the NSII and other offices as well to be connected by telephone exchanges while other units have telephone connection via an external provider. A back-up centre is created to secure the operation of the IS and support the system in the event of accidents and natural disasters.

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2.3   The utilization of components given by European Commission (RI, ICD 1, ICD 2, MD, WEBIC)

NHIF

As mentioned above, the institutions does not plan to develop its own Access Point (AP) and will use and implement a solution proposed by Siemens and the European Commission (EC) (AP_RI & WE-BIC).

At present the NHIF strives to avoid any direct integration (with the use of ICD 2 interface) as such a step may result in additional difficulties and may delay the implementation of EESSI by May 2012. WEBIC will be used for testing purposes despite the relatively limited functionality of Siemens' application referred to in the documents disseminated by the EC. The NHIF will also use an independent MD (given the fact that Siemens recommended the installation of a NDS server at each AP).

NRA

At this stage NDS and WEBIC will be installed and configured for access to and exchange of data with the EC. The adaptation and testing of the NRA's own software programme will be carried out in parallel to the installation of WEBIC.

ASA

RI and WEBIC components will be used at the AP in ASA as the national system cannot be connected to the system of the EC for the time being.

NSII

This description presents an alternative for the implementation of data exchange.

First, an operational and tested system of the EC should be in place. A parallel testing system should be developed to enable the testing of the developed modules.

Second, strict descriptions of the fields in SED should be provided to generate XML descriptions and "embed" them in the interface descriptions of the European Commission's system. The descriptions should also specify the sources to fill in data in the fields. Internal sources can be used where the data comes from the organisation and external sources, where the data is from another organisation. Data from other organisations should be available via a range of means including via transfer, WEB services or any other way, if the above is not applicable, e.g. data cannot be provided under the scheme above. Internal data can be used when generated from DBMS or imported from an application when the data is in the inappropriate format, e.g. printed documents.

Since at present the participating organisations in Bulgaria are physically (WAN) connected, it should be noted that defining the scope of data to be received from other organisations is given a high priority as the successful implementation of the action depends on it.

Obviously the use of WEBIC should ensure the system operation at least in the beginning. Yet, it is critical to properly secure data used at a national level. It should be possible to generate such data ac-

cording to different criteria, editions, chronologically and with the necessary number of references. It is also important to note that the history of the data exchanged in the country and amongst countries should be fully traced.

2.4   The utilization of national components

NHIF

In its capacity as one of the four APs (ApBG01), the NHIF is in charge of the Structured Electronic Documents (SEDs) from the S series (Sickness). The NHIF is also responsible for some of the documents referring to horizontal data exchange, i.e. H documents (Horizontal issues).

The NHIF has to test some of the components yet provided by the EC. In the period of preparation and tests the technical experts assess and analyse the probable end solutions including the opportunity for implementation or integration with a national application for this AP as well as for the possible future use of Solution3 / Solution7 after their development.

ASA

At present the national system components cannot be connected to the AP.
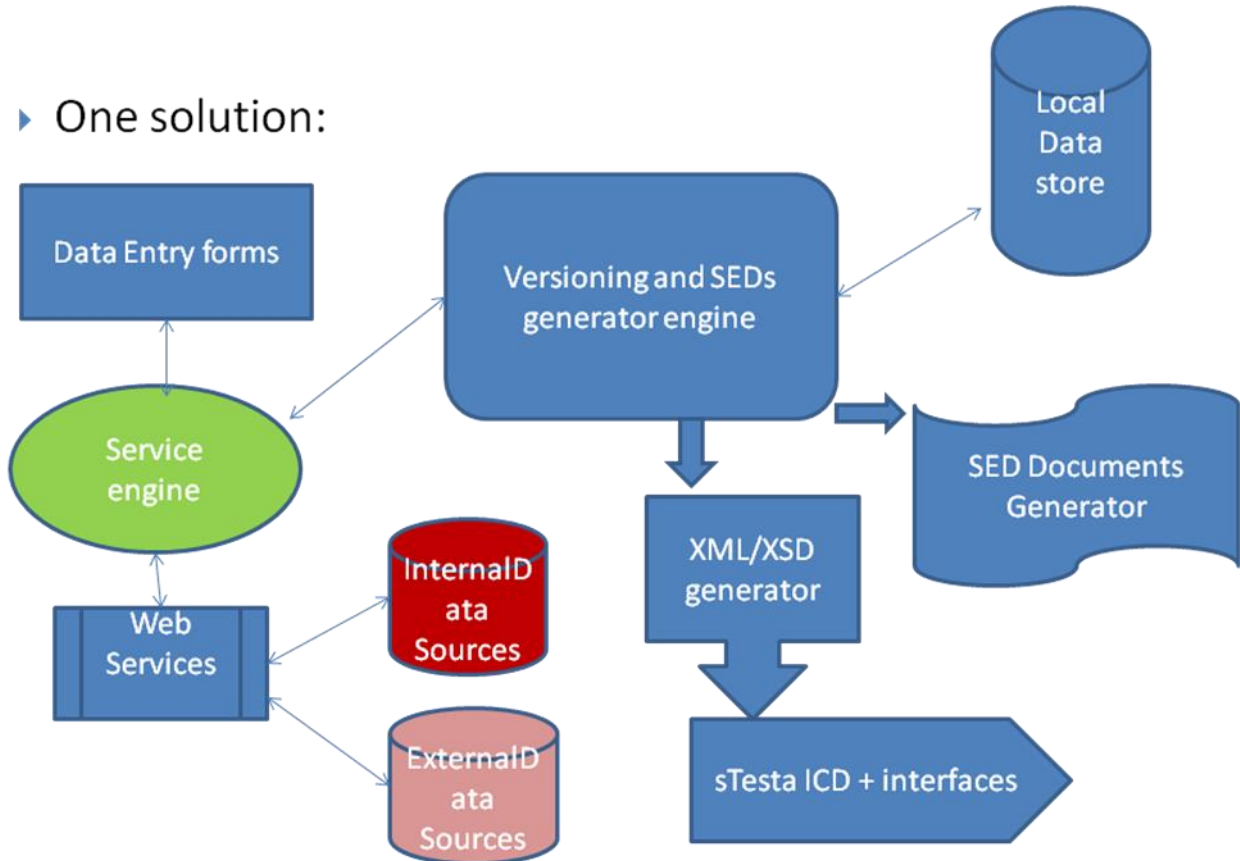
NRA

The NRA will analyse the capacity of the software programme for electronic exchange provided by the EC. The NRA will continue to adapt its own application to enable joint use of WEBIC and its own software programme.

NSII

One solution:

Data Entry forms

Service engine

Web Services

InternalData Sources

ExternalData Sources

Versioning and SEDs generator engine

Local Data store

XML/XSD generator

SED Documents Generator

sTesta ICD + interfaces

3.   The actual experience

(testing, productive background)

NHIF

No practical experience was acquired in the EESSI project because no tests were carried out with the exception of the connection of the NHIF to sTesta network to organise directory services. The NHIF has the necessary hardware and software to launch the installation of the AP and test its components. The equipment in place meets the requirements for hardware submitted by Siemens. NDS and AP_RI are being installed in line with the guidelines of Siemens. After Acceptance Testing the IT team will decide on the final configuration needed to put the system in operation (Production Environment) in line with the requirements of the EC.

An internal information portal was developed for the purposes of this project where all documents related to EESSI project are kept. All experts related to the implementation and use of EESSI have been granted access to the portal. The portal is planned to be upgraded with new functionalities such as a system for enquiries and tracking at the level of AP SPOC.

ASA

Pursuant to the internal rules of the Social Assistance Agency, Department Coordination of Social Security Schemes is set up within the structure of Directorate International Cooperation, Programmes and European Integration. This department is to regulate the activities related to cooperation with the competent authorities of the EU Member States by processing and keeping current exchange of letters with information on family benefits and long-term care in compliance with the existing social security regulations; coordinate the work of Social Assistance Directorates related to data exchange on family benefits received by individuals and solve any issues that might occur; carry out methodological work for the implementation of social security regulations.

In this respect Department Coordination of Social Security Schemes duly processed 4043 documents exchanged on a daily basis in compliance with the social security regulations in place and made over 3700 phone calls with citizens and officials with the Social Assistance Directorates.

As of 1 May 2010 with the entry into force of the EU regulations on the coordination of social security systems, i.e. Regulations 883/2004 and 987/2009, E forms have been replaced by the so-called SEDs (Structural Electronic Documents) which will be exchanged electronically amongst the EU Member States. The e-forms are structured in a different way. In this respect Department Coordination of Social Security Schemes thoroughly examined the forms to differentiate elements in the forms within the competence of ASA in its capacity as AP. This will be a starting point for further collaboration with the other competent institutions for the purpose of data exchange.

In relation to acquisition of knowledge to operate WEBIC by the Social Assistance Agency as an end user of electronic data exchange, an employee with the Departement attended a training seminar in Brussels in November 2010 at the invitation of the EC. The main goal of the seminar was to introduce trainees to the developed programme WEBIC for electronic exchange of data pertaining to family benefits and pensions in compliance with the new Regulations 883/2004 and 987/2009. The WEBIC proramme with its general goals and outlook was presented. The main operations performed by the programme and the powers of the relevant competent institutions related to electronic exchange of data between APs were presented. The presentation was followed by group work in small groups

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to practice how to create Structured Electronic Documents (SEDs) using "Business Scenarios", where electronic documents are tracked between the relevant APs in the event they had to be forwarded between different administrations to have separate field filled in.

The following tests were carried out at the AP in ASA:
- access to PAI;
- access to MMI (Master Management Interface);
- a successful test for data recording in the Master Directory via sTESTA.
The AP in the ASA is undergoing technical implementation and configuration. It is based on IBM x3560 M3 server and RedHat Linux Ent 5.4 operating system in line with the recommendation made by the EC. 1 server is planned carry out real tests at present but additional servers can be connected if necessary or if the volume of data grows.

NRA
The NRA took the following steps in a timely manner to ensure the necessary preparation for the application of the new regulations:
1.	Revision of the internal procedures and instructions in place including the drafting of templates for applications to determine and certify the applicable legislation pursuant to the new regulations;
2.	Drafting of guidelines on the determination and certification of the legislation applicable pursuant to the new regulations;
3.	Implementation of a WEB-based application (an electronic registry) for the issuance of A1 certificates on the applicable legislation. It should be noted that the NRA started issuing A1 certificates from the very entry into force of the new regulations;
4.	Compiling a Guide on the determination and certification of the applicable legislation pursuant to *Regulation (EC) No 883/2004.* The Guide was drafted to support the officials at the NRA in the determination and certification of the applicable legislation in compliance with Title II of Regulation No № 883/2004 and create premises for uniform application of the existing national social security legislation.
With a view to raising public awareness on the rights and obligations ensuing from the new regulations and facilitating the clients of the agency, the contents of the guide are also accessible to visitors of the NRA's website at the following address http://www.nap.bg/ospage?id=184.
The Guide is in line with the recommendations made by the *Administrative Commission for the Coordination of the Social Security Systems* to arrange information materials developed by the *European Commission* to be supplemented at a national level.
5.	Informing the clients of the NRA about the application of the new regulations as of 01.05.2010, determination of the applicable legislation and the related rights and obligations of the persons;
6.	Participation of NRA officials in training courses (including with a foreign speaker, a representative of the Administrative Commission for the Coordination of the Social Security Systems), workshops and conferences on the determination and certification of the applicable legislation under the new regulations;
7.	Preparation for the introduction of electronic data exchange under the new regulations. In 2010 the NRA's network was connected to sTesta in relation to the implementation of the elec-

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tronic data exchange of social security documents in line with the requirements of Regulation 883/2004 and NRA's participation in the trial phase.

In accordance with the instructions of the EC the National Directory Server (NDS) was installed for replication of data by MMS. Difficulties occurred during the installation and the installation process failed. An enquiry was made to the EC. After the recommendations received and consultations with colleagues from the other APs across the country, the current version of the operating system was replaced by a new, higher version of Red Hat 5.4. The NDS was installed previously on 5.1. The second time the installation process was successful and the required data replication is underway.

A new server with operating system Red Hat 5.4 wa prepared for the trial phase to be carried out in the period 01–03.2011. It has been already configured to operate in sTESTA network. Installation files from the EC's server were received and the installation options were configured. The NRA is planned to install the software programme for WEBIC. We expect that by 02.2011 we will have a configured test environment and that the functionalities of WEBIC will be tested by NRA's officials.

NSII

In 2010 and 2011 in respect of the obligations of the NSII to secure the insurance rights of people and guarantee free movement within the meaning of the above regulations, the following measures were adopted and implemented:

1. Involvement in the preparation at a national level including in the following activities

-        Definition of tasks and issues in the working group set up by order of the Minister of Labour and Social Policy whose members are representatives of all competent bodies and institutions in Bulgaria;

-        Drafting opinions on draft documents on the coordination of the social security systems;

-        Practical training for transition to electronic data exchange between the competent institutions of the EU Member States;

2.   Preparation and implementation at the level of the competent institution, i.e. the NSII. The list of activities includes the following:

-        Participation of experts in the trainings/seminars held in Brussels and chaired by Mr. Spiegel and Mr. Coulthard for the application of the new regulations and introduction to the WEBIC system in 2009 and 2010;

-        Written guidelines prepared and approved under the procedure adopted at the NSII for the application of coordination rules for principles, common and special provisions, assessment of rights, coordination mechanisms and data exchange; 6 guidelines since 2010 divided according to social security risks covered by the regulation, types of SEDs and their filling in;

-        Seminars held with employees from across the institution working for the application of the European regulations – separately for short-term risks and pensions;

-        An invitation extended to a Swedish expert and a training organised for the employees to apply Regulations 883/04 and P987/09 in the area of assessment of rights and payment of unemployment benefits;

-        An invitation to German experts and a training organised for the employees to apply Regulations 883/04 and P987/09 in the area of assessment of rights and payment of pensions;

- Designation of responsible people, pension insurance mentors and experts commissioned to work and visit territorial offices to provide methodological help and carry out checks;

- Daily methodological help for experts from the central office and territorial offices by e-mail and an external telephone line. So far in addition to daily contacts, on-site visits were carried out in all territorial offices and some of the busiest offices with large number of served people under the regulations had two on-site visits for support. Due to the largest number of pensioners and served people under the new regulations, the Social Security Department in Sofia, is supported daily by the responsible person and at least three more experts. 4 extra trainings were held in Sofia Department in 2009 and 2010;

- Random checks of the exchange of letters related to complaints filed by persons with length of service in different states;

- Meetings held with competent institutions and bodies in the pension insurance systems of Germany and Cyprus;

- Organisation and/or participation in consultation and information days for citizens;

- Organised meetings between experts of the competent institution in Bulgaria and Germany to clarify issues related to the application of regulations and correspondence forms – E-forms and SEDs for pension insurance – in June 2011;

- Agreements concluded with Germany and Cyprus for exchange of experts with the competent institutions and annual meetings held for solving cases and issues;

- Meetings held and contacts kept with Solvit – Bulgaria to discuss more efficient ways to address issues related to complaints filed by citizens;

- Preparation and updating of information on insured and interested people in the NSII's website on regulations;

- Daily reception area maintained in the central office and each territorial office to address issues related to the application of the European regulations.

3. Main forthcoming tasks of the NSII related to the preparation and the commencement of the application of the regulations:

- Receipt of translations in Bulgaria of all SEDs for pensions and their introduction in the daily work of the employees;

- Development of a product or a system for operation at an internal institutional level to prepare information in the SED, store and submit it at a European level via WEBIC network/flows; and

- Organization of internal and national collaboration between MLSP, NSII, NHIF, EA, ASA, ADP, Bulgarian Association of Supplementary Pension Security Companies (BAAASPSC), NRA, Ministry of Health (MH) within the working group of the Ministry of Labour and Social Policy to clarify and coordinate at the last stage the responsibilities of the relevant institutions related to SEDs, manner of exchange of letters, data exchange, checks, etc.

# 4.		The Actual risks identified

## 4.1		At the European level

o		Delays in the timetable during the building of EESSI and the central node and software – the late start-up of the system's full operations,

o		Insufficient technical support for EESSI operations,

o		The business model introduced in the latest versionb RI V5 is not capable for testing for the following reasons:

Business flows are not implemented according to specifications and guidelines published by EU commission

SEDs are not implemented according to specifications and guidelines published by EU commission

WEBIC functionality (validation, repetitive blocks) blocks testing since certain steps cannot be taken.

o		The risk involving the current interconnection of most of the member states to EESSI as of 1.5. 2012

o		The risk that delays at EU level lead to delays in building the national APs and make it more and more impossible the transitional period of 1.5.2012 to be kept. Perhaps it should be pro-longed. There could a joint note on that issue of the 6 testing MSs.

## 4.2		At the National level

The main risk is the lack of integrated IT system for exchange of information among the APs and the other competent institutions and other institutions where certain data is kept, e.g. civil status registers of population service, schools and universities, etc.

Now in Bulgaria we are in process of developing an effective national exchange of data system, ena-bling the EESSI exchange. That issue is connected with the following aspects and steps to minimize the potential risks:

1. To be defined clearly and correctly the competence of the BG institutions regarding the SEDs, considering institutions' functions under the coordination regulations.

Such an analysis has been performed at the NRA and is identified which SEDs are to be generated by the agency, incl.H and R series, as well as the business flows.

A full analysis of SEDs of their competence has been performed also at the ASA.

It is still pending and is a problem before the whole process of installing EESSI in Bulgaria that the NSII and the NHIF haven't performed full analysis of SEDs and business flows of their competence. For the time being this is the basic challenge before the national preparation process – these 2 institu-tions to finalize the relevant analysis and we expect it to be solved by the end of April.

2. To identify data necessary for SEDs which is not available at the competent institutions database and should be received from another institution, in view to develop a national system for effective exchange of information among the BG institutions for the purposes of EESSI.

That analysis has been performed at NRA and ASA and will serve as a basis to broaden their bilat-eral agreements on data exchange with the other BG institutions.

There is also idea to adopt a national legislative measure regulating the national exchange of information for the purposes of Regulation 883/2004.

3. To be identified clearly and correctly the business processes necessary to proceed with EESSI exchange, at the level of a separate institution.
At the NRA that analysis will be delivered by the end of March. At ASA the analysis has been performed.
Such an analysis is still not delivered by the NSII and the NHIF.

In addition, Bulgaria also recognizes the same risks identified in the CZ report:
o   The adherence to the national timetable
o   The financing of the national parts of the AP
o   The selection of a poor quality implementer for the project's technical solution
o   Low personal data security
o   Poor quality security and data storage
o   Insufficient coordination of the implementation work
o   An insufficient qualified workforce in the sustainability period
o   Higher demands for the operation of the new system by officials

4.3   At the particular AP level

<u>At the level of NHIF</u>

-          timely software installation;

-          definition of Structured Electronic Documents (SEDs) and business workflows serviced by AP;

-          national roles and profiles recommended at a national level for the application of EESSI security policy;

-          staff turnover, of specialists and key figures in particular, as well as the employment of experts not working exclusively on EESSI project pose a significant risk. The installation and configuration of AP_RI highlighted the shortage of sufficient well-trained and motivated IT specialists for the relevant operating systems, databases, communications, etc.;

-          dependence of the NHIF on other national institutions for the processing of SEDs within its competence;

-          impossibility to forecast at this stage the volume of work related to electronic exchange both in terms of the number of SEDs and the needed number of users;

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At the level of ASA

The main risk when preparing for EESSI is the lack of a centralized data base between the Headquarters and the regional units. Another identified risk is the technological time, necessary for receiving data about family benefits paid to persons, from the Social assistance directorates.

At the level of NRA
- Ensuring the full range of necessary technical environment for the project;
- WEBIC application doesn't cover the flows related to the legislation applicable. In this connection the risks identified are: inability to test the functionality of the application; lack of time for training of the personnel for work with the application and so on;
- inability to evaluate the behavior of the system at full load and provided configuration - access from the offices of the NRA to the server at the headquarters of the NRA, which will be installed WEBIC

At the level of NSII

The basic risc is qualification of the staff that are users of the system. SEDs analisis have been currently developing that will help to identify information needed for filling-in and generating documents. NSII has a large multicomponent information system that is why the data for filling-in of documents could have more than one source. This also refer to the possibility each expert to treat ambiguously the fields of the documents or to treat it depending of the specific situation.

We have not to underestimate the ambiguity of data interpretation depending on the language of issuing. The lack of unified identification creates potential risks for searching options of the system. The use of different languages needs special settings of the IT environment that must be implemented by all member countries and this is not the case at the moment. Another specific risk is the operation with the documents that are not filled-in in a correct way as well as the follow-up possessing of these documents within the system. From the IT viewpoint the support of EESSI system and its deployment at national level is also a risk. This is related to the important problems that it creates for security, local settings and performance problems.

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5.   Problems to be solved in the concrete time horizon

(schedule)

It is absolutely necessary for the NSII and NHIF to finalize the complete detailed analysis of SEDs and flows of their competence.

Then the all 4 APs should agree on a common system for exchanging information at national level among the APs and the other competent institutions.

For the purposes of live testing it is also necessary a model of flows and SEDs to be loaded to APs.

Login to WEBIC has been made, but no actual testing has yet been started. Bulgarian APs will test the connections with DG EMPL, create user accounts for testing and start the technical tests of WE-BIC and RI.

NHIF

The preparatory tests for AP_RI & WEBIC in line with EESSI Action Plan are to be completed on 8 April 2011 and it is obvious that the NHIF will fail to comply with this deadline.

After the tests are launched, we will be able to point out real and specific issues in the implementation of EESSI.

At present we need to participate in forums, learn from the positive experience of the others and try to take advantage of the best practices in the other MS and our institutions.

We need better coordination of data exchange with other stakeholder and competent institutions.

It is also difficult to ensure the sufficient administrative capacity for operation of SEDs to enable the processing of SEDs received and the issuance and delivery of the electronic documents. This requires planning of the needed financial resources in the NHIF's budget staff recruitment and training.

ASA

There are serious problems in application performance. The main problem is auditing the business model and application flows. There are serious deficiencies in the revival of the application and putting it into test mode.

NRA

The JIRA system for recording and issue tracking may be used to describe technical issues at the trial phase of the project for electronic exchange. Greater operability can be achieved if the opportunity is considered for direct contact by e-mail or phone with the other institutions from the participant states. Data exchange on the choice of institutions about the manner of data exchange, via WEBIC or own programmes and ICD2 tools, will be important.

NSII

Important problems emerged with the work capacity of the application. The main problem is implementation of business models and flows into the application. Problems emerged also during the animation of the application and test regime induction. JIRA - where the problems are described, provides guides that are not always helpful for current problems resolving. Answers of emerging problems and difficulties are often delayed   Lost of time is observed during the finding of errors in the documents. As a whole the application did not work in a stable way at the moment.

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5.1 For informing the partners

5.2 For discussion
- Attention should be paid on the use of Cyrillic alphabet
- Different sources of information flows used for SEDs filling-in and generating, as well as ambiguity of information in some fields, referring to their titles, also need special attention especially or the secinf round of checks of the SEDs versions

5.3 For discussion and accepting of the recommendation within the project framework

6. Attachments

(according to the authors´reflexion)