

4 Conclusions

4.1 Conclusions related to the requirements of the new EU Regulations and the existing national legal and procedural framework

The conclusions in this section are based on the findings in Chapter 3.1, “The requirements of the new EU Regulations and the existing national legal and procedural framework”.

As regards the national legal framework that should support the fulfilment of the e-Cohesion requirements, all key pieces are in place, being regulated by the Romanian laws relating to:

- Electronic signature,
- Archiving of electronic documents,
- Electronic time stamping of documents and
- Protection of personal data.

4.2 Conclusions related to comprehensiveness of existing electronic systems

The conclusions in this section are based on the findings in Chapter 3.2, “Comprehensiveness of existing electronic systems”.

Recommendations regarding the conclusions in this section can be found in section 1 of Chapter 5, “Recommendations”.

In terms of fulfilling minimum requirements stemming from the new Regulations of the European Commission for the programming period 2014-2020, the only, however important, area of concern remains the specific e-Cohesion requirement – for “full implementation of the electronic data exchange between beneficiaries and authorities”. At present, with the existing electronic systems, this area is practically uncovered. The exceptions are few and extremely limited.

The details can be observed in table 4.1, on the next page. This table represents an extract from table 3.2.2, in chapter 3.2, and focuses only on those areas representing the relevant EU requirements (marked by a thicker black border). For more details, see table 3.2.2 (chapter 3.2, and its accompanying notes, page 24).

The MySMIS system that was developed recently and that has just undergone the testing stage, promises to solve most issues of that problem. For the current 6 OPs the system was designed with and for, MySMIS would fulfil entirely the e-Cohesion requirements. See also recommendation 1.1 in chapter 5.

As a reminder – NPRD and OPF are not subject of consideration of the minimal requirements of e-Cohesion.

Therefore, only SOP HRD and the 4 OPs for ETC (would) remain uncovered. For SOP HRD, the ActionWeb system is successfully used since 2008, but its scope is still limited at present, not covering all e-Cohesion requirements. MIS-ETC has implemented e-Monitoring, a module of MIS-ETC Web Application, but this module is even more limited, dealing only with the beneficiary's

expenditures, out of the whole area of financial data. See also recommendations 1.2 and 1.3 in chapter 5.

The Focus Group confirmed, with minority of different opinions, that MySMIS should be the one system developed further and used as the only system responding to the requirements of the e-Cohesion Regulation.

Table 4.1. Electronic systems coverage of the **e-Cohesion minimal requirements** (data exchange between beneficiaries and authorities)

Programme	Major areas of data collections related to project implementation, to be exchanged between beneficiaries and authorities			
	Procurement data	Financial data	Progress monitoring data	Exchange of additional data
ETC (all OPs)		eMonitoring ^{[1] [2]}		
OP ACD	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]
OPTA	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]
ROP	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]
SOP E	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]
SOP HRD		ActionWeb ^[2]	ActionWeb ^[2]	
SOP IEC	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]
SOP T	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]	MySMIS ^[1]

[1] Not implemented yet

[2] Limited features

4.3 Conclusions related to compliance of the electronic systems with the checklist

4.3.1 In terms of quality of the existing electronic systems, the results of this evaluation show that many improvements are needed in various aspects.

As a general image, the electronic systems are in place, they fulfil the minimum requirements, but they do not excel. Therefore they need further improvements/development.

This conclusion is based on the findings in chapters 3.3.1, 3.3.2, 3.3.3 and 3.3.4.

This conclusion led to recommendations 2.1, 2.2 and 2.3 in section 2 of Chapter 5, "Recommendations".

4.3.2 Strictly from the technical point of view, all the systems prove to be satisfactory, with only few particular exceptions where improvements are required:

- SMIS, ActionWeb and MIS-ETC lack enough check mechanisms for timely identification of errors existing in the system. All the other systems could improve these mechanisms, too.

This conclusion is based on the findings in chapter 3.3.5.

This conclusion led to recommendation 2.4 in Chapter 5, "Recommendations".

- SPCDR should revise its mechanisms of validation in order to cover all relevant input data in a reliable manner.

This conclusion is based on the findings in chapter 3.3.5.

This conclusion led to recommendation 2.5 in Chapter 5, "Recommendations".

- SMIS and ActionWeb display a too high frequency of minor incidents.

This conclusion is based on the findings in chapter 3.3.7.

This conclusion led to recommendation 2.6 in Chapter 5, "Recommendations".

4.3.3 *The area where most of the systems disappoint relates to satisfying the users' needs:*

- All the systems need to improve their portfolio of predefined reports, in order to produce those reports their specific users need. Especially, SMIS lacks mostly of the predefined specific reports required by its users, depending on their individual and specific needs.

This conclusion is based on the findings in chapters 3.3.2, 3.3.3 and 3.3.4.

This conclusion led to recommendation 2.1 in Chapter 5, "Recommendations".

- All systems would benefit of a major revision in terms of features/functionality and data content as such to become more user oriented. Beside the initial objective of covering the minimal requirements, now the systems should provide more useful features for their users. Especially SMIS and MIS-ETC need major improvements in terms of usefulness, but also in terms of user friendliness. For this latter issue, these systems need also a revision of their user interface in order to become easier to understand and to use.

This conclusion is based on the findings in chapters 3.3.1, 3.3.2 and 3.3.3.

This conclusion led to recommendations 2.2 and 2.3 in Chapter 5, "Recommendations".

4.4 Other conclusions

4.4.1 *The existing electronic systems are not able to interface each other.*

This leads to cases when users have to enter certain sets of data twice, in two different systems. This implies additional effort from users and additional risks regarding data quality (one of the systems being usually disregarded).

This conclusion is based on the finding in chapter 3.2, within the text related to table 3.2.1.

This conclusion led to recommendation 4.1 in Chapter 5, "Recommendations".

5 Recommendations

5.1 Recommendations for ensuring the coverage of the e-Cohesion minimal requirements

The recommendations in this section are based on the conclusions in section 2 of Chapter 4, “Conclusions”.

5.1.1 Finalising the implementation of MySMIS for the 6 current OPs it was designed for

The following issues should be had in view, among many others:

- a. The highest levels of management in each relevant Ministry have to be aware of the requirements and support the implementation process of the necessary changes implementing MySMIS in their respective institutions in order to fully fulfil the requirements.
- b. All IT services from the various involved bodies (Ministries, MAs, IBs, etc.) should coordinate and cooperate at all times within preparation and implementation of new programmes. That requires establishment of a working IT group, which would meet regularly to exchange information and discuss joint implementation of the systems in their respective institutions. Another solution assuring constant contact and cooperation among the specialists is to create ‘a chat group’ within MySMIS specifically for this IT working group.
- c. Each institution involved in the process should make appropriate changes in their internal working procedures in order to ensure effective implementation of that “new system”.
- d. Training of users – there is a need for assuring constant long-term schedule of training of users for any IT system (that covers also users of MySMIS), including series of trainings for beneficiaries (it can be financed from OPTA).
- e. Ensuring the full package of IT services and resources for the new system (including system administration, help-desk, data operators and technical maintenance) – it requires financing of those services, with necessary manpower and budgets.

Suggested activities:

- Finalise the on-going development process of MySMIS (final stages of testing and, if needed, the final adjustments to the system).
- Develop the full package of manuals for MySMIS (including for beneficiaries) and a model of procedures.
- Conclude administrative decisions or protocols for implementation of MySMIS in each relevant institution.
- Each institution should update their internal procedures, based on the provided model of procedures.
- Secure hosting for MySMIS (hardware resources, system administration, technical maintenance) and finalise the installation process.
- Provide large-scale initial training of all users in all institutions – a basis for long-term training schedules during implementation of the programmes (covering new users but also updates to the system).
- Ensure data operators and initial population of the database with start up data.

- Ensure a permanent help-desk service functioning in 24/7 mode.
- Promote MySMIS among the beneficiaries, including periodical sessions of training.

5.1.2 Extending MySMIS in the area of ETC

Further software development for MySMIS is needed. The solution could be either an upgrade of existing MySMIS, or a copy of MySMIS produced however modified to fit the ETC requirements.

Suggested activities:

- Continue the development process of MySMIS by adding the features required for ETC.
- After the development of this extension is finalised, perform final tests and final adjustments.
- Update the manuals and the procedures with new elements brought by this extension.
- Conclude administrative decisions or protocols for implementation of MySMIS in the new relevant institutions.
- Each of the new participant institutions should update their internal procedures, based on the provided model of procedures.
- Upgrade the production version of MySMIS with the new version including the extension.
- Provide large-scale initial training of all new users.
- Ensure data operators and initial population of the database with start up data for the new extension.
- Update the help-desk service with the new elements (training).

5.1.3 Covering the minimal requirements for SOP HRD

One of two options can be used:

- A. Extending the features of existing ActionWeb in order to comply with all the minimal e-Cohesion requirements and developing an interface for data exchange between ActionWeb and SMIS.
- B. Extending MySMIS to cover also the specific needs of SOP HRD and replacing ActionWeb with MySMIS.

Each option has its own advantages and disadvantages. But the decisive question is who is better prepared for the required further process of software development and implementation. We suggest using the latter option (B) – expand MySMIS to become “The System” for the new programming period for all the new Romanian OPs.

Suggested activities for option B: the steps are the same as for recommendation 1.2. above.

5.2 Recommendations for improving the existing electronic systems used by the authorities

The recommendations in this section are based on the conclusions in section 3 of Chapter 4, “Conclusions”.

All systems should undergo a major revision, which may be required anyway in order to update the electronic systems to the specific elements of the future programming period.

During this revision, the following issues should be had in view for all systems:

2.1. Improvement of the portfolio of predefined reports, in order to produce those reports the users need. SMIS needs mostly such improvement.

This recommendation is based on the conclusions 3.1 and 3.3 in Chapter 4, "Conclusions".

2.2. Improvement of features and data structures, in order to become better user-oriented. All systems should try to provide more useful features for their users, allowing them to save working time and to reduce the risk of human errors.

This recommendation is based on the conclusions 3.1 and 3.3 in Chapter 4, "Conclusions".

Additionally, the following issues should be considered for certain systems, respectively:

2.3. SMIS and MIS-ETC should be improved in their user interfaces (at least for the most important or complex forms) in order to provide: easier understanding, better overview of data in the system, easier retrieving of needed data, etc.

This recommendation is based on the conclusions 3.1 and 3.3 in Chapter 4, "Conclusions".

2.4. SMIS, ActionWeb and MIS-ETC should ensure enough control mechanisms to allow timely identification of errors existing in the system.

This recommendation is based on the conclusion 3.2 in Chapter 4, "Conclusions".

2.5. SPCDR should revise its mechanisms of validation in order to cover all relevant input data in a reliable manner.

This recommendation is based on the conclusion 3.2 in Chapter 4, "Conclusions".

2.6. Improvement of mechanisms for help-desk and technical assistance for SMIS and ActionWeb in order to reduce the rate of minor incidents and to improve the response time in case of incident (at all levels where the system is used).

This recommendation is based on the conclusion 3.2 in Chapter 4, "Conclusions".

Suggested activities (for each of the electronic systems):

- Detailed analysis for the purpose to develop a new version of the system.
- General design of the new version of the system.
- Development of the new version of the system, until final stages of acceptance, including testing.
- Develop new manuals for the system and update the internal procedures of the institutions using the system.
- Upgrade the production version of the system with the new version, including data migration from the old database, if it is the case.
- Provide new training for all users.

5.3 General recommendations for all electronic systems

The recommendations in this section are the result of the synergetic effect of all information gathered and processed during this evaluation. They are typical best practice recommendations applied to the current cases, which may bring consistent improvement to the existing information systems.

5.3.1 Ensuring continuous software development support, especially for MySMIS, SMIS and MIS-ETC (which could be brought under the same ownership as SMIS in order to concentrate the efforts):

- a. Quick repair of software deficiencies claimed by the users.
- b. Improvement of support provided to the various programmes, especially for their specific needs.
- c. Quick update to the changes in the real world environment.

5.3.2 Ensuring continuous training of all users:

- a. Introductory training for new users.
- b. Second training for existing users, for refreshing knowledge on less obvious features (needed for more complex systems).
- c. Advanced training for specific categories of users (advanced features of the system and methods of solving certain complex tasks).
- d. Promoting important tools, modules, features, etc. that are less known and that might improve the users' experience. For example, Art4SMIS, the reporting tool for SMIS, deserves to be better promoted among the users, as it can allow them to build their own reports, accordingly to their needs. This tool is not so well known by the regular users because it was added to SMIS at a later stage and only the supervisors benefited of training.

5.4 Other recommendations

5.4.1 Any new development should take into account the opportunity to use data already existing within other databases / systems.

Thus it should be avoided duplication of data between several different systems. The users should not be required to input the same data twice. That would be avoided by using one, proposed above, new system.