Evaluation of system, administration and external influences on the implementation of OP RD&I

FINAL REPORT

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Contracting authority:

Ministry of Education, Youth and Sports
Karmelitská 7
118 12 Praha 1

Contractor:

Consortium
RegioPartner, s.r.o.
Prosecká 412/74, 190 00 Praha 9

AQE advisors, a.s.
třída Kpt. Jaroše 1944/31, 602 00 Brno

CONTENTS

LIST OF ABBREVIATIONS

AS CR	Academy of Sciences of the Czech Republic
Benefit7	web application for filling and submitting electronic grant applications
CR	Czech Republic
CSO	Czech Statistical Office
Q 1-3	questionnaire survey no. 1-3
VAT	value added tax
EC	European Commission
ES	European Community
ESOP	electronic system OP RD&I
EU	European Union
FAQ	frequently asked questions
FM	Finance Manager
FC	focus group
GACR	Grant Agency Czech Republic
ECs	employment classification
MF	Ministry ofFinance
MI	monitoring indicator
MRD	Ministry for Regional Development
MIT	Ministry of Industry and Trade
SME	small- and medium-sized enterprises
MEYS	Ministry of Education, Youth and Sports
MR	monitoring report
NCI	National Codebook of Indicators
NCA	National Coordination Authority
OP	operational programme
OP RD&I	Operational Programme Research and Development for Innovation
OP EC	Operational Programme Education for Competitiveness
PM	Project Manager
PA	priority axis
RCN	Research Council of Norway
RRI	Regional Research Institute
RDIC	Research, Development, and Innovation Council
MA	managing authority
SF	Structural Fund
TACR	Technology Agency of the Czech Republic
R&D	research and development
TD	tender documentation
RFP	Request for payment

EXECUTIVE SUMMARY

The Contracting Authority of the "Evaluation of System, Administration and External Influences on the Implementation of OP RD&I" was the Ministry of Education, Youth and Sports (hereinafter referred to as the "MEYS"). The project executor was selected on the basis of tender proceedings, and the contract for work was signed on 20 April 2011. RegioPartner, s.r.o. and AQE advisors, a.s. became project executors.

The objective of this evaluation project was to evaluate system, administration and external influences on the implementation of OP RD&I with an emphasis on the **evaluation of problematic factors, links and external influences** of the implementation of the OP RD&I priority axis. Another related objective was to compile **recommendations for improving** the implementation system and **for the elimination of problematic external influences.**

To identify problematic factors, links and external influences, the evaluator used quantitative and qualitative methods and the principle of triangulation. Project implementation was based on the analysis of data and documents. Secondary data was mostly provided by the contracting authority (relevant OP RD&I documentation and OP RD&I projects, using IS MONIT 7+ data), primary data was acquired through an extensive field investigation, including:

- questionnaire surveys conducted with the managing authority staff
- evaluation interviews conducted with the managing authority staff
- questionnaire survey conducted with recipients of assistance
- evaluation interviews with recipients of assistance
- focus groups with recipients of assistance
- expert panel.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

Due to the wide scope of the project brief, the final report prepared by the evaluator includes a large number of findings and conclusions and recommendations arising out of these findings. For the sake of clarity, recommendations have been classified by priority and timescale, and they have been processed in the form of an Action Plan. Conclusions and recommendations of strategic nature are stated below.

EXPERIENCE AND QUALIFICATIONS OF MA PERSONNEL

The personnel capacity of the OP RD&I and the qualifications of MA staff were identified as some of the key negative implementation factors both by the recipients, and by the MA staff themselves; this is partly caused by the extreme administration demands of the OP RD&I, the fact that the PM and FM are overloaded with work and there is a fairly high fluctuation of employees.

As shown from the carried out analysis, one of the aspects of the insufficient personnel issue is the inexperience of some of the staff, in particular in the area of public tenders, management of project finances, public support, and insufficient knowledge of how science and research operate and how they are funded, and how research organisations work etc.

➢ Recommendation: to further qualifications of the MA staff of the OP RD&I

Comprehensive measures to increase and further qualifications of the MA staff of the OP RD&I who are in direct contact with recipients (project and finance managers):

1. Analysis of educational needs including the creation of individual educational plans
2. Implementation of internal and external education (primarily presence learning on the "Learning-by-Doing" basis)
3. Application of mentoring – to increase thorough and complex application of the mentoring principle, leading new or less experienced PMs and FMs by more experienced PMs and FMs including passing on experience, consultation sessions and sharing experience.
4. Using shadowing, in particular for new employees or employees with less experience – they should shadow the work of employees working in the same or similar position
5. Creating an internal knowledge database within the OP RD&I MA for the needs of PMs and FMs in order to ensure the consistency of the information provided, linking it to the existing FAQ database and overviews of the most common errors etc.

Implementation proposal: Parts 1) and 2) externally in cooperation with relevant MA staff, parts 3) to 5) internally, possibly use individual consultancy services in terms of mentoring and shadowing.

RISK OF UNCLEAR DELIMITATION OF COMPETENCIES AND INSUFFICIENT COMMUNICATION

The current internal organisation of the managing authority represents a move to a clearer allocation of responsibilities for individual processes, both at the level of section directors and department managers. However, the evaluator has identified some problems connected with insufficient delimitation of competencies within individual departments.

The Implementation Division staff of the OP RD&I are in permanent contact with recipients and therefore provide a major impetus for changes in strategic programme

management to employees who are responsible for the strategic programme management, and who should therefore act on the impetus. As shown by the field research, relevant cooperation was not always ensured within the necessary scope.

- **Recommendation: Delimitation of competencies and information channels**

To clearly define competencies of the Division of Management of the OP RD&I and the Implementation Division of the OP RD&I, to clearly define superior/subordinate positions within individual processes and to strictly comply with the competencies.

Consequently, the evaluator recommends setting up clear and easy information channels not burdened by formalities as at the vertical level (transfer of information from the management to members of staff and vice versa) and at the horizontal level (between individual members of staff and individual departments).

Implementation proposal: Internal using an external advisor to ensure feedback and impartiality.

OVERLOADED OP RD&I STAFF

Another negative factor in the area of personnel capacities is overloaded staff (in particular project and finance managers) as projects are administratively extremely demanding and complex. Insufficient personnel capacity results in checking only formalities without the possibility to further examine specialised research, but also it results in long deadlines for dealing with specific project problems and indirectly also the high risk of providing disputable or wrong procedures to project executors.

- **Recommendation: Analysis of overloaded staff and potential personnel reinforcement**

To carry out an analysis on how much individual members of staff are overloaded in view of further increases in the agenda connected with advanced implementation of the already running projects, and in view of new potential projects.

If the analysis confirms that the staff are overloaded (in particular PMs/FMs), the evaluator recommends taking immediate action by increasing personnel capacities or using services of an external organisation.

Implementation proposal: Externally, the decision to increase capacities / use an external organisation lies with the MA, or it is the decision of the MEYS management .

USE OF TECHNICAL ASSISTANCE

The use of technical assistance represents a major issue in terms of the OP RD&I implementation structure efficiency. The key issue is that of insufficient flexibility when dealing with MA requests and a limited functionality of the set up processes.

Administrative restrictions, arising out of the need to comply with internal MEYS regulations, represent a major factor which limits the use of technical assistance resources, as the internal regulations add to the significant rigidity of the whole system; it is also necessary to coordinate work with the technical assistance section for the OP EC. Another area which is not executed adequately is technical assistance planning and professional organisation of public procurement, this results in time delays when dealing with requests and project implementation.

- **Recommendation: Analysis of technical assistance functioning**

To carry out a detailed analysis on how the OP RD&I technical assistance functions. The output of the analysis should be a proposal for optimal integration of technical assistance in departments ensuring implementation of OP RD&I, including optimisation of processes and deadlines for the implementation of technical assistance projects.

Implementation proposal: externally.

PROJECT CYCLE PROCESSES

To set up processes within the project cycle seems problematic, in particular in terms of compliance with deadlines for advance payments including the evaluation of systems for monitoring compliance with these deadlines, and in terms of potential redundancies and duplicities of the documentation presented for applications, and during the implementation process.

No major problems have been identified in the project selection process. Despite that the compliance with procedural rules is not always perfect in practice, in particular in terms of overloaded staff. Compliance with the four eyes principle might serve as a good example.

- **Recommendation: Process auditing and consequent process optimisation**

To carry out a comprehensive process audit (procedural audit) including setting up deadlines for all fundamental processes by the MA, and at the same time, to check the already set up deadlines and identification of processes where it is most common that deadlines are not met.

To carry out process optimisation in connection with the process analysis (audit) that would, in addition to the deadlines at MA level, also consider internal deadlines at the recipients' level (e.g. arranging for statutory body signatures).

Implementation proposal: externally.

SUCCESS FACTORS OF PROJECT IMPLEMENTATION ON THE MA SIDE FROM THE RECIPIENTS' STANDPOINT

Recipients are very well aware of factors which make the MA, and the cooperation with the MA, a success. The main factors, that were also perceived as barriers to the successful implementation of OP RD&I projects, were identified by the recipients as follows:

- Personnel capacity of the OP RD&I and the qualifications of MA staff
- Conditions and deadlines for project administration
- Changes of OP RD&I implementation rules
- Support of the OP RD&I MA (documentation, seminars etc.)

The concluded investigation showed a fairly strong dissatisfaction of recipients with these factors, which was in many cases caused by the insufficient communication of certain rules, both by the MA and the recipients, but also internally at the recipients'.

➢ **Recommendation: Feedback system, more effective and intensive communication with the recipients**

To create and implement a system that will monitor and evaluate recipient feedback and respond to it. The feedback system should include the following:

- Identification of communication channels between the representatives of the OP RD&I MA and its "clients" – applicants and recipients
- Ways of establishing client satisfaction with MA services (field survey, information from PM/FM, etc.)
- System for collating proposals for improvement and complaints including an online system

The feedback system should include setting up regular and systematic communication with the MA and project representatives (e.g. in the form of monthly meetings to solve problematic areas, information on prepared rules and discussing the change in rules)

Implementation proposal: externally.

PROJECT SUSTAINABILITY

The sustainability of supported centres during the operational phase after the termination of funding from the OP RD&I proved to be a cross-sectional problem perceived both by the recipients and the research and development experts. The sustainability of projects may be threatened at several levels:

- Sustainability of results and project outputs (reaching the indicators for contractual research volume, newly created jobs and other measurable results and outcomes of the OP RD&I projects)
- Financial sustainability of projects, both in terms of the overall funding of recipient organisations, and in terms of contractual research and securing other resources outside the state budget (in particular international grants)
- Personnel sustainability – fluctuation of members of the research team, insufficient capacity and qualifications to carry out their jobs as part of the implementation team, and

also the unsustainable amount of wages to be paid after the termination of support from the OP RD&I.

- **Recommendation: Analysis of sustainability of projects including the preparation of crisis scenario**

To carry out complex analysis of the sustainability of OP RD&I projects after termination of support from the OP RD&I, including verification of the overall absorption capacity of the project (e.g. the total sum of monitoring indicators regarding students and research staff – if these numbers of students and researches are at all achievable, in particular with regard to newly created job positions).

A crisis scenario will be prepared in connection with the analysis that will take into consideration delays of major parts of the projects in terms of the number of projects, and in particular their volume, but also in terms of their partial or incomplete application in operation, including the impact on delivering programme goals.

Implementation proposal: externally.

1 INTRODUCTION

The Contracting Authority of the "Evaluation of System, Administration and External Influences on the Implementation of OP RD&I" project was the Ministry of Education, Youth and Sports (hereinafter referred to as the "MEYS"). The project executor was selected on the basis of tender proceedings, and the contract for work was signed on 20 April 2011. RegioPartner, s.r.o. and AQE advisors, a.s. became project executors.

The main purpose of the evaluation is to systematically evaluate the implementation of the OP RD&I. The intention is also to evaluate risk factors on the recipients' side including the evaluation of dynamics of changes in these factors in order to analyse and better understand operational outcomes, achieved results and progress towards a long-term impact.

The objective of the evaluation of system, administration and external influences on the implementation of the OP RD&I is to **evaluate problematic factors, links and external influences** on the implementation of the OP RD&I priority axis and the follow-up **recommendations to improve** the implementation system and to **eliminate problematic external influences.**

In accordance with the above stated objective set forth in the tender documentation, the evaluator focused in particular on the **identification of existing and potential barriers restricting effective implementation** of the OP RD&I, both on the recipients' side and on the managing authority side, including proposals for recommendations.

To identify problematic factors, links and external influences, the evaluator used quantitative and qualitative methods using the principle of triangulation[1]. Project implementation was based on the analysis of data and documents. Secondary data was mostly provided by the contracting authority (relevant OP RD&I documentation and OP RD&I projects, using IS MONIT7+ data), primary data was acquired through extensive field investigations, including:

- questionnaire survey conducted with the managing authority staff
- evaluation interviews conducted with the managing authority staff
- questionnaire survey conducted with recipients of assistance
- evaluation interviews with recipients of assistance
- focus groups with recipients of assistance
- expert panel.

The detailed description of the evaluation methods used and the course of project execution is stated in Annexe 8.

[1] Triangulation refers to a method of using different types of data or different methods parallely when studying the same problem.

The use of individual methods when solving individual parts of the project is shown in the following table:

Table 1 – Use of methods when solving individual parts of the project

	Efficiency of the OP RD&I implementation structure	***Analysis of physical and financial progress***	***Links between individual projects***	***Analysis of demand for contractual research and legislative and administrative impacts***	***Impact of the RD&I System Reform on the OP RD&I***	***Accessibility of good quality human resources***
Document analysis	●	●	●	●	●	●
Analysis of IS MONIT7+ data		●				
Questionnaire survey conducted with recipients	●	●	●	●	●	●
Questionnaire survey conducted with the managing authority staff	●	●				
Evaluation interviews with recipients	●	●	●	●	●	●
Evaluation interviews conducted with the managing authority staff	●	●				
Focus group	●		●	●	●	●
Expert panel				●	●	

Pursuant to the brief, the evaluation focused on the following areas:

- Evaluation of the implementation structure of the OP RD&I both in terms of the functionality of the managing authority, and in terms of project implementation by recipients of assistance (Chapter 2)
- Evaluation of the physical and financial progress of the OP RD&I (Chapter 3)
- Links between individual projects of the OP RD&I (Chapter 4)
- Analysis of user demand for contractual research (Chapter 5)
- The impact of the implemented RD&I System Reform in the Czech Republic on the implementation of the OP RD&I, alternatively other factors influencing OP RD&I projects (Chapter 6)
- Accessibility of good quality human resources to manage OP RD&I projects (Chapter 7)

All findings and recommendations relate to 27 September 2011, which is the decisive date when the data from IS MONIT7+ was generated.

2. EFFICIENCY OF THE OP RD&I IMPLEMENTATION STRUCTURE

The efficiency of the implementation structure can be viewed from various aspects. The following characteristics are considered by the evaluator as fundamental for an efficient implementation structure, in particular:

- Simplicity of the implementation structure, in particular in the case of operational programmes that are very complex in terms of the physical focus of interventions. According to the evaluator the OP RD&I falls into this group of operational programmes.
- A correct internal set-up of coordination and communication, as even within a very simple implementation structure comprising one section and several departments there might be significant problems with coordination and miscommunication.

In accordance with the brief, the efficient functioning of the implementation structure was viewed from two points of view. Firstly, the internal functioning of the managing authority was evaluated based on the analysis of documents and information gathered through field research (questionnaire surveys and evaluation interviews) conducted with the managing authority staff of the OP RD&I (for details see Annexe 2 and Annexe 8). Secondly, the view of the recipients of the assistance with regard to the set-up and functioning of the implementation of the OP RD&I was included (for details see Annexe 1 and Annexe 8).

With regard to the brief requirements to evaluate problematic factors, links and external influences of the implementation of the OP RD&I, and to compile a list of recommendations to improve the implementation system and to eliminate problematic external factors, the primary focus of the evaluator was to identify factors and barriers that might in some way restrict effective implementation of the OP RD&I.

The findings stated below represent a synthesis of findings from the quantitative, and in particular qualitative research carried out with a wide spectrum of OP RD&I stakeholders.

2.1 INTERNAL FUNCTIONING OF THE MANAGING AUTHORITY DURING THE IMPLEMENTATION OF THE OP RD&I

During the analysis of functioning of the managing authority during the implementation of the OP RD&I, the evaluator focused in particular on the internal arrangement of departments in charge of programme implementation (Chapter 2.1.1), their personnel capacity (Chapter 2.1.2.) and the use of technical assistance (Chapter 2.1.2).

2.1.1 ORGANISATIONAL STRUCTURE OF THE MANAGING AUTHORITY

The operational programmes Section Management was authorised to carry out the function of the managing authority for the OP RD&I. This section is also the managing authority for the OP EC. The implementation structure of the OP RD&I includes, in particular, the Management Division of the OP RD&I and the Implementation Division of the OP RD&I[2]. Other departments participate in the implementation of the OP RD&I – mainly the Technical Assistance Department, the Independent Department for EU Fund Budgets and indirectly also the Independent Department of Technical Assistance for Project Control. These aforementioned departments work not only for the OP RD&I but also the OP EC.

No intermediary parties operate within the OP RD&I which means the maximum possible simplification of the implementation structure and elimination of problems concerning the relationship of the MA and intermediary parties that are involved in some other OPs.

The current course of implementation of the OP RD&I resulted in several important changes in the organisational structure of the MA of the OP RD&I.

The main implementation change in the implementation structure is the establishment of two separate departments as of 1 January 2011 – the Management Division of the OP RD&I and the Implementation Division of the OP RD&I. The task of the first of the aforementioned divisions is mainly strategic management, whereas the other division is in charge of implementation of the operational programme and it is primarily focusing on relationships with the recipients of assistance. In terms of meeting the recipients' needs this arrangement is much clearer.

The division of competencies of the OP RD&I between two separate departments is viewed as suitable by the evaluator as this arrangement of the implementation structure offers many significant advantages (e.g. separating the implementation phase from strategic management and monitoring, efficient management of human resources in small departments etc.).

However, even despite the advantages stated above the evaluator identified risks that had arisen and that exist as a result of establishing two separate departments:

- ***Risk of unclear delimitation of competencies***

Although the current arrangement enables a clearer allocation of responsibilities for individual processes, both at the section managers' level and at the department managers' levels, the evaluator has identified problems connected with insufficient delimitation of competencies within individual departments.

As shown by the questionnaire survey conducted with the MA staff, approximately 50% of respondents consider the functionality of the current implementation structure worse not better, and definitely much worse than before the reorganisation. The unclear delimitation

[2] When mentioning the managing authority of the OP RD&I (or the MA), the evaluator refers to departments that are actually implementing the OP RD&I, i.e. the Management Division of the OP RD&I and the Implementation Division of the OP RD&I.

of competencies and insufficient communication were mentioned by the respondents as the most common problematic aspects. This is, for example, demonstrated by unsuitable allocation of tasks and unclear delimitation of functional subordination/superiority between individual departments.

The evaluator finds that the insufficient coordination among the staff of both aforementioned departments represents a risk. The Implementation Division staff of the OP RD&I are in permanent contact with recipients and therefore provide a major impetus for changes in the strategic programme management to employees who are responsible for the strategic programme management, and who should therefore act on the impetus. As shown by the field research, relevant cooperation has not always been ensured within the necessary scope.

The above stated aspects introduce uncertainty into the process of implementation and cause negative tension among the staff when working on their tasks and activities.

- ***Risk of insufficient communication***

Communication channels have been extended by having two separate departments. This results in insufficient communication between the staff of individual sections and departments, miscommunication and insufficient sharing of information. As shown by the field research, coordination and communication is restricted at the vertical level (from the management to members of staff), and at the horizontal level in terms of cooperation between co-workers.

The department ensuring technical assistance for the OP RD&I has also undergone organisational changes. As of 1 June 2010 the Technical Assistance Department of the OP RD&I was relocated from the Technical Assistance Section directly under the Management Division of the OP RD&I. As of 1 December 2010 during the implementation of a new organisation structure, the technical assistance agenda was relocated back to the Technical Assistance Section.

The position of this section, in particular the implementation of the technical assistance provided as part of the OP RD&I, is very specific. This is because this section provides technical assistance not only for the OP RD&I but also the OP EC. On one side this might seem a logical solution as many requests for technical assistance are the same or very similar for both operational programmes, on the other hand this means high demands on the coordination between individual departments of the Management Division for these Operational Programmes which is the managing authority for both OPs of the MEYS. Transferring the technical assistance agenda back under the Technical Assistance Section resulted in the fact that on one hand the agenda was united again within one section and was therefore easier to coordinate joint activities for both operational programmes under the MEYS, on the other hand the technical assistance of the OP RD&I was removed even further from final users.

The field survey conducted among the Implementation Division staff of the OP RD&I and the Management Division of the OP RD&I showed that many members of staff consider technical assistance as a problematic part of the implementation structure of the OP RD&I,

which significantly limits their working performance and in particular their time capacities, as solving problems related to technical assistance is a very lengthy and time demanding process. 89% of the respondents of the questionnaire survey conducted with the MA staff stated that the existing implementation structure does not enable quick and efficient use of technical assistance.

A major problem is also represented by insufficient communication between the sections involved. As shown by the questionnaire survey conducted with the MA staff, the cooperation and coordination between the Management Division of the OP RD&I, or the Implementation Division of the OP RD&I and the Technical Assistance Section is valued by the members of staff working within the implementation structure as very negative (marks 4[3] and 5 prevailed in the survey).

As shown by the evaluation interviews, the Technical Assistance Section staff are very well aware of the problematic aspects connected with the use of technical assistance. A Coordination Department was set up as a measure to increase better efficiency of the technical assistance use, and the task of the department was to coordinate the technical support activities of the OP RD&I and OP EC.

Another organisational change was the cessation of the Large Project Department as of 1 July 2011, and a separate department for checking technical assistance projects was set up.

The occurrence of changes is perceived as very frequent by the MA staff, and for some participants of the evaluation interviews conducted with the MA staff of the OP RD&I it was, in their opinion, quite difficult to understand the actual organisation structure.

The evaluator does not regard the frequency of changes as advisable because constant changes in the organisational structure can have major impacts on the successful implementation of the OP RD&I. This fully corresponds with the analysis of risks carried out by the managing authority, the Summary Risk Management Report 1 February 2011 – 31 August 2011 identifies frequent changes in the organisational structure (risk no. 8) as one of the critical risks.

2.1.2 PERSONNEL CAPACITY OF THE MA

The system of implementation of the OP RD&I can be characterised as a system that is **very administratively demanding** both for the MA and the recipients. The fact that the system is very administratively demanding is perceived quite intensively both by the recipients (which based on the evaluator's experience this is a common phenomenon), and also by the actual MA staff. To ensure administratively demanding processes requires relevant personnel capacities, both on the recipients' side and the managing authority side.

As of 30 September 2011 the MA departments had 94.9 full time employees ensuring the administration of the OP RD&I:

[3] Evaluation marks as at school when 1 – excellent, 5 – not satisfactory

Department	*Number of employment contracts*
Division of Management of the OP RD&I	25.75
Implementation Division of the OP RD&I	48.65
Technical Assistance Division (only with regard to the OP RD&I)	15
Management Section of the OP EC	5.5
Total	94.9

Source: OP RD&I MA

In 2010 there were major employment changes in the departments that were dealing with the implementation of the OP RD&I. As shown by the table below, nearly half of the staff left in 2010:

Year	*Number of terminated employment*	*Number of employees*	*Average number of employees*	*Fluctuation*
2008		37.00	18.50	0.00
2009	2.00	74.75	37.38	2.68
2010	38.00	80.75	40.38	**47.06**
2011	30.00	108.5		27.65

Source: OP RD&I MA

As shown by the analysis of the available data and information, the MA deals with an increased fluctuation of staff and with a shortage of experienced staff. This trend was confirmed not only during the field survey conducted with the MA staff (for details see Annexe 2) but it was also communicated by the recipients of the assistance, since this trend is very negatively perceived by them.

Recipients marked the personnel capacities of the OP RD&I and qualifications of the MA staff in the questionnaire survey as one of the negative factors of the OP RD&I implementation structure. The insufficient personnel capacity of the MA was seen by the recipients as the main barrier holding up project implementation – recipients are aware of the fact that the MA staff they are in contact with are not sufficiently experienced (project and finance managers), and the recipients are aware of the fact that these managers are overloaded since most of the projects have now moved into the implementation stage. The inexperience of project and finance managers (hereinafter PM and FM) working with Benefit7+ plays a major role in this respect according to the recipients. These findings have been confirmed by the results of the evaluation interviews conducted with PMs and FMs as part of individual

priority axis, and the findings have resulted from the fact that most of the PMs and FMs have been working for the OP RD&I MA for less than one year.

The evaluator found the key barrier to be the shortage of qualified and experienced staff at the MA, and the high fluctuation of staff and the related outflow of know-how.

As shown by the analysis, the issue of having insufficient personnel capacities can be viewed from three different perspectives:

1) **Overloaded staff** (in particular PMs/FMs) with regard to high administrative demands and complexity of projects which results in extended deadlines (e.g. when checking Monitoring Reports, Payment Requests, response to solving specific project problems etc.).
2) **Inexperienced staff,** in particular in the area of public tenders, management of project finances, public aid, with regard to the operation of sciences and research and the way they are funded, the issue of research organisations etc.
3) **Insufficient cooperation** with other specialised departments of the MEYS.

As a result of insufficient personnel capacities:

- only formal requirements are checked and specialist project solutions are not examined any further, which might have major impacts on the success of project implementation.
- Long deadlines for dealing with specific project problems.
- A high risk of providing disputable or wrong outputs to project executors caused by PM/FM inexperience.

The evaluator has identified actions that disproportionately increase administrative demands on the whole process (more information provided in Chapter 2.2), which results in increased demands on the personnel capacity of the MA. For example the necessity to provide recipients with duplicate documentation, and also duplication during the implementation of some procedural tasks by the MA. A whole quarter of respondents to the questionnaire survey among the MA staff believe that their work when delivering tasks is duplicated. Although duplicity of some tasks is advisable (e.g. the four eye principle), it would be purposeful to have a procedural audit carried out at the MA to disclose doubled procedural tasks and to propose optimisation of MA procedures.

2.1.3 USE OF TECHNICAL ASSISTANCE

As already mentioned above, the use of technical assistance represents a major issue in terms of the OP RD&I implementation structure efficiency. One of the main important reasons causing this problem, according to the evaluator, is the non-standard inclusion of technical assistance into the OP RD&I organisational module, where the MEYS staff responsible for OP RD&I technical assistance is not functionally subordinate to the MEYS

staff responsible for managing the OP RD&I; both members of staff are on the same level as they are both division managers.

Apart from the unsuitable inclusion of technical assistance into the organisational structure, we can find other factors that cause the aforementioned efficiency problems.

As shown by the concluded analysis, the key issue is **insufficient flexibility** when dealing with MA requests and the limited functionality of set up processes.

Administrative restrictions, arising out of the need to comply with internal MEYS regulations, represent a major factor which limits the use of technical assistance resources, as the internal regulations add to the significant rigidity of the whole system. Some of the internal MEYS regulations result in administrative restrictions which, consequently, result in significant delays, even in the case of not very major financial sums paid from technical assistance for support needs. As a result, the MA is not sufficiently equipped in terms of material equipment (computers, office supplies, business cards etc.).

An important restricting factor is also the rule concerning the ban on dividing public procurement at the ministerial level. The evaluator does not in any way doubt the necessity to implement public procurement in a transparent manner. However, it is essential to search for solutions within the ministry that will not result in significant aggravation of conditions for the implementation structure staff (the issue of getting notebooks for new employees can serve as a good example of when it is not possible to use technical assistance to purchase computers, as public procurement for computing technology for the ministry is already underway).

The field research also revealed that technical assistance is not sufficiently planned. In this respect the most important tool is the annual plan for technical assistance, which has more of a formal role at the moment. During the planning of technical assistance resources, and this planning should start several months before the end of the year, the main parameters of prepared projects should be defined. It is clear that details or exact financial allocations cannot be determined that far in advance, however detailed planning of technical assistance is extremely important as it will enable the Technical Assistance Division to plan their work throughout the year, and to deal in advance with issues arising out of the fact that some members of staff "are swamped with work".

With regard to the annual technical assistance plans, we must also mention their connection with the technical assistance Framework Plan and the regular evaluation of the annual plans. The current module evaluates the delivery of technical assistance annual plans ex-post, which is not advisable according to the evaluator, as it is not possible to respond to potential discrepancies and problems. Therefore, the evaluator recommends introducing regular (mid-term) evaluation of the annual technical assistance plans as of 30 September of the relevant year, providing that this evaluation should be done by the Technical Assistance Section of the OP RD&I.

The evaluator also pointed out the fact that relevant users (i.e. the Management Division of the OP RD&I or Implementation Division of the OP RD&I) should be coming into the process of preparation and implementation of technical assistance projects in the role of persons who define the requirements and key parameters of the projects, but who should not participate in administrative tasks connected with the projects, as this activity is not

allocated to them in the Organisational Rules, and mainly because it keeps them away from other activities.

As shown by the concluded analysis, a major problem in drawing technical assistance is represented by significant **delays** both during the preparation and implementation of projects. The evaluator also found that professional capacities for public procurement were insufficient, which results in time delays when dealing with requests.

In this regard, the evaluator considers it important to mention the fact that the Operational Handbook, in the column marked as implementation deadline, says "based on needs with regard to the deadline of required performance". The evaluator recommends that the deadlines for required performance are determined at the start when defining the project plan (if possible already during the creation of the annual technical assistance plan) providing that the compliance with these deadlines will be binding for the Technical Assistance Department of the OP RD&I.

Some of the specific practical issues that should be addressed with regard to technical assistance are as follows:

- Insufficient premises, which is mainly shown during the arrival of new employees. The evaluator views the attempt to solve this problem as positive, i.e. acquiring new premises for staff in the existing building, although these premises only represent a temporary solution (transfer of the OP EC MA to another building). According to current estimates the issue of insufficient premises should be solved at the beginning of 2012.
- Insufficient equipment of the OP RD&I MA staff in terms of computing technology in particular, but also in terms of standard office supplies. However small the latter problem might seem to be, it is necessary to realise that the MA staff spend a lot of time dealing with such problems, which consequently results in a lack of time to deal with other tasks.
- delays during public procurement of external service suppliers, etc.

Although for some uninformed observers the use of technical assistance might seem not very important within the context of the OP RD&I implementation system, the evaluator would like to point out the fact that since this problem has not been dealt with for a long period of time, it significantly limits the possibilities of the OP RD&I MA in terms of implementation and strategic management, and it results in having demotivated staff.

As shown by the investigation and analysis, key functions of technical assistance are restricted, namely in terms of creating conditions and providing services to facilitate the work of the OP RD&I MA and ensuring a smooth course of implementation of the operational programme. Separating technical assistance from the OP RD&I MA is considered by the evaluator as unsuitable as the negative aspects of this step have significantly outnumbered the positive ones.

2.2 SECURING ADMINISTRATIVE TASKS OF THE PROJECT CYCLE

In the next part the evaluator will analyse processes connected with the project cycle in terms of its two basic phases:

- project selection
- project implementation process

2.2.1 CHALLENGES IN THE OP RD&I AND PROJECT SELECTION PROCESS

One of the key tasks of the implementation system is to ensure a trouble free course of the project cycle for all projects within the OP RD&I and, in connection with this, to comply with the targets determined at the programme level. One of the main preconditions to comply with this requirement is effective management of announcing challenges.

The main document for the announcement of challenges is the Annual Challenge Plan, which is regularly evaluated. As it was shown by the evaluation interviews, the Annual Challenge Plan is only a support tool, and it is quite common that it is not complied with. Nevertheless, the evaluator sees the fact that there is a working group preparing challenges as very positive, the group also ensures that the queries of specialists in the given field are taken into consideration. More of the MEYS departments provide their comments on the challenges, with the problem seemingly being the delay in approving challenges by the ministry. In this case the only possible solution is more intensive communication with the management of the ministry on the given issue.

The project selection process within the OP RD&I is quite unique, and the evaluator views it as a very valuable experience and advises to continue working with this process in the future.

In terms of procedural rules the evaluator did not identify any major problems during the analysis of relevant documentation in the project selection process. However, the evaluation interviews showed that compliance with procedural rules did not always work well in practice, in particular because of the overloaded staff. Compliance with the four eye principle might serve as a good example.

Combining the evaluation of formal requirements and admissibility into one step within the OP RD&I is also viewed as positive by the evaluator because of the fact that there is no more discussion of what is the better sequence for these two checks (i.e. should the check of formal requirements precede the admissibility check or vice versa).

The main "know-how" of the project selection process within the OP RD&I is the actual multi-layer assessment of project applications by specialists at individual levels. The system of multi-layer assessment of project applications by specialists is a fairly complex system, while on the other hand it is clearly described in all relevant documentation so applicants who come across this issue for the first time have enough relevant information.

The multi-layer evaluation assessment according to the existing system is of course time demanding, and some of the projects can be delayed by more than one year from the time they are created to the time they start being implemented.

On the basis of accessible information (in particular on the basis of desk research results and evaluation interviews) the evaluator can state that the deadlines stipulated in the Operational Handbook are adequate and, apart from a few cases, they are complied with. The negatives arising out of the fact that project evaluation is time demanding are balanced, as the system is in all respects adopted to ensure that the highest quality projects are selected, i.e. projects that comply with the determined objectives of the priority axis and the whole operational programme as much as possible.

The project selection process within the OP RD&I has a specific feature, i.e. a negotiation process when some of the project parameters are amended. The evaluator finds the possibility to amend parameters as advisable. This is because the projects presented within the OP RD&I are extremely complicated and complex. This access can help applicants consider comments based on the experience of evaluators, who have dealt with the same issues before, be aware of threatening problems which the evaluators had to deal with in the case of similar projects, and last but not least understand the functioning of project results in practice.

In terms of the evaluators involved, preventing conflict of interest is a major issue. As shown by the evaluation interviews, all evaluators sign a declaration that there is no conflict of interest. However, OP RD&I MA cannot in reality verify if there might be a conflict of interest. On the basis of evaluation interviews no conflict of interest has been proven, even though there have been investigations of alleged conflicts of interest.

The OP RD&I is the only OP in the Czech Republic that cooperates with international evaluators during the evaluation of projects. The MA handles an extensive database of potential foreign evaluators. The extensive scope of the database is documented by the fact that the number of external evaluators included in the database exceeds the number of evaluators who have been approached to evaluate the already submitted projects.

According to the evaluator, the MA staff have sufficient skills to find suitable foreign evaluators. However, the evaluator sees the fluctuation of staff as a potential risk with regard to the related loss of the experience they have acquired.

In terms of evaluation of own criteria, these issues have been discussed in detail in the evaluation project "Evaluation and optimisation of setting put assessment systems for operational programmes in the programme period 2007-2013[4], as contracted by the National Coordination Authority.

The evaluator thoroughly examined the results of the aforementioned evaluation project concerning the OP RD&I and, apart from partial exceptions, the evaluator adopts these results.

The evaluator would like to point out the general conclusion of the aforementioned evaluation project, in particular the fact that the criteria of individual operational programmes are defined too widely. In this regard the OP RD&I was evaluated as a fair risk, which the evaluator can confirm after the analysis of selection criteria and recommends specifying the

[4] Source: http://www.strukturalni-fondy.cz/Narodni-organ-pro-koordinaci/Dokumenty/Dokumenty-k-evaluaci/FileList/Evaluace-a-optimalizace-nastaveni-systemu-hodnocen/Zaverecna-zprava-z-projektu

assessment criteria. The criteria were defined too generally which has a double negative impact. Firstly, the applicant does not exactly know what is going to be the subject of assessment, which to a certain degree makes the preparation of the project harder, and on the other hand the evaluators do not know exactly what is going to be the subject of assessment, which might lead to situations when the opinions and evaluations of individual evaluators will differ. Significant progress was made in this area, in particular with regard to adding commentaries on selection criteria to the applicant's Handbook, nevertheless the evaluator believes that there is still a lot of room for further improvement.

The requirements for more specific details are even more pronounced in the case of individual assessment criteria. The evaluator appreciates that the assessment criteria are differentiated for individual intervention areas, or specific challenges, and therefore they can capture the requested key characteristics of projects, which is not always the case with regard to Czech operational programmes (some of the operational programmes even have the same criteria for the whole operational programme).

2.2.2 PROJECT IMPLEMENTATION PROCESS

During the analysis of processes related to the actual project implementation, the evaluator, in accordance with the brief, identified and evaluated both negative and positive key factors that might have an impact on the implementation of the OP RD&I on the recipient side.

Contrary to other operational programmes, OP RD&I has a relatively limited circle of potential and legitimate applicants. On one hand this somewhat simplifies MA communication with potential and existing applicants and recipients, while on the other hand, the programme is exposed to a higher level of external influences (legislative impacts, personnel capacity for project implementation, cooperation and competition among potential grant recipients etc.).

Factors with major impacts on the success (success factors) or failure (barriers and restrictions) of project implementation, must be monitored on three different levels:

1) Internal factors at recipient's side
2) System and legislative impacts
3) Factors regarding the implementation structure of the OP RD&I

In terms of importance as viewed by the recipients, factors regarding the OP RD&I implementation structure prevail, and this importance is basically the same for recipients across the priority axis.

During the analysis of positive and negative project implementation factors the evaluator worked with the outputs of the recipient questionnaire survey, which were further verified in evaluation interviews with recipients and focus groups.

Factors necessary for successful project implementation as viewed by recipients

Ad 1) Internal factors at recipient's side

Recipients consider the following ten positive internal factors as fundamental since, in their opinion, these factors have the biggest impact on successful project implementation and are therefore basically essential for successful project implementation (in the order of importance):

- Ex-ante project funding – advance payments
- Good and realistic project set-ups
- Good quality project teams in all implementation phases (in particular the research team in the implementation/operational phase of the project)
- Successful course of selection proceeding with no delays and errors
- Good quality communication and cooperation within the project team and other recipients' employees
- Support by the institution management
- Good quality and reliable partners
- Experience from implementation of other projects
- Cooperation with other institutions and projects
- Linking the project with other activities (PhD programmes, international cooperation)

The above stated factors must also be seen as conditions for successful project implementation, and as shown by other findings in terms of internal barriers and restrictions at the recipient's side, they are not sufficiently met in some cases, or they do not function.

As shown by the analysis, many recipients had experience with funding some of their activities from EU funds, either by actively participating in acquiring resources from pre-entry funds and structural funds in 2004-2006, or from community programmes, in particular during the 6th and 7th Framework Programme. However, a major part of recipients lacked and still lack experience with the implementation of projects supported from EU funds, or they lack experience with implementation of infrastructural projects on that scale. This corresponds with the fact that recipients stated having insufficient experience or no experience with drawing European funds as one of the internal barriers on the recipients' side.

There were major differences in evaluating the readiness and unreadiness of recipients working with large projects when the recipients had no previous experience; the recipients see this fact as a significant barrier (e.g. a potential risk factor).

Ad 2) System and legislative impacts

The following can be defined as the most important system and legislative factors that influence project success rate:

- Public procurement (further described in Chapter 2.3)
- Delimitation or non-delimitation of contractual research (further described in Chapter 5)
- Cooperation among individual recipients, or projects (further described in Chapter 4)

Ad 3) Factors regarding the OP RD&I implementation structure

Recipients very strongly perceive success factors that are dependent on the MA, or cooperation by the MA; based on the questionnaire survey the following five key factors for successful implementation of projects, as perceived by recipients with regard to the implementation structure of the OP RD&I, can be defined and were consequently confirmed in the course of evaluation interviews and focus groups:

- Cooperation with project and finance managers including consultancy support
- Clear conditions with minimal changes during the preparation stage, and in particular during the project implementation stage
- Fast administration of projects and individual key documents (monitoring reports, payment requests)
- Provision of information in a comprehensive and uniformed format, in particular in a timely manner
- Timely advance payments

Specific factors influencing the implementation of large projects are in most cases identical with the factors mentioned above, while a significantly higher frequency and importance is shown for the following factors:

- Process of project negotiation – its length and knowledge of people participating in the process (in particular the MA including external experts and evaluators)
- Trouble-free selection proceedings (in particular selection proceedings for constructions)
- Setting up legislative conditions and environment for contractual research

Barriers to successful implementation of the OP RD&I, or individual projects from the recipients' point of view

Ad 1) Internal barriers on the recipients' side

Internal cross-sectional barriers as perceived by the recipients are as follows:

- Ensuring sustainability of projects after termination of project support, at three levels:
  - Sustainability of results and project outputs (reaching the indicators for contractual research volume, newly created jobs and other measurable results and outcomes of the OP RD&I projects)

  - Financial sustainability of projects, both in terms of the overall funding of recipient organisations, and in terms of contractual research and securing other resources outside the state budget (in particular international grants)
  - Personnel sustainability – fluctuation of members of the research team, insufficient capacity and qualifications to carry out their jobs as part of the implementation team, and also the unsustainable amount of wages to be paid after the termination of support from the OP RD&I.
- Insufficient experience with drawing EU funds and implementation of projects of similar sizes
- Risk of non-legitimate expenses including non-legitimate VAT
- Insufficient support by the institutional/organisational management of the recipient, in particular in the case of the university – faculty relationship

Ad 2) External system and legislative influences that have a nature of external barriers and restrictions

In terms of system and legislative factors, public procurement is a clear cross-sectional area (factor) where the biggest barrier is represented by setting up a legislative framework for the OP RD&I for the implementation of public procurement, and the necessity to comply with requirements at three different levels:

- Public Procurement Act (or its principles in the case of small scale public procurement)
- Rules for selecting suppliers within the OP RD&I
- Internal rules of the recipient

Other system and legislative barriers are as follows:

- Non-readiness and non-conceptuality of the RD&I in the CR (parallel non-coordinated support of research centres and industry with no link to existing and future needs)
- "Non-anchoring" and "untested" contractual research in the Czech environment, both at the recipient's side and the MA

Ad 3) Barriers within the implementation structure of the OP RD&I

A major part of the project implementation success factors on the MA side as stated above is perceived by the recipients both as a barrier and restriction.

These negative factors (barriers) can be divided into several areas:

i. Personnel capacity of the OP RD&I and the qualifications of MA staff
ii. Conditions and deadlines for project administration
iii. Changes of OP RD&I implementation rules
iv. Support of the OP RD&I MA (documentation, seminars etc.)

Personnel capacity of the OP RD&I and the qualifications of MA staff

As stated above in Chapter 2.1.2, recipients perceive frequent changes of project and finance managers, the related outflow of know-how of the managing authority, and the inexperience of new staff very intensively.

Terms and conditions and deadlines for project administration

The following negative factors (barriers) are perceived by recipients in terms of deadlines and terms and conditions for project administration:

- Generally seriously long administration deadlines – in particular in the case of monitoring reports and payment requests or project changes, but also long deadlines for advance payments. The MA consistently insists on compliance with deadlines and terms, including not very significant deadlines (e.g. the deadline for anticipated announcement of challenges), but in many cases there are no set deadlines and if there are, they are not always complied with (site controls, checking of MR and RFP, change requests) – in this regard, 44% of respondents answered "mostly dissatisfied" or "very dissatisfied" in the questionnaire survey.
- Ambiguous interpretation of rules on the MA side resulting in the need of more consultations with PMs/FMs and the overall uncertainty regarding project implementation. As shown by the questionnaire survey conducted with the MA staff, this is to a certain extent connected with fluctuation of staff, and a lack of experienced staff. This issue is also mentioned in the summary report on risk management, in particular risk no. 18: "ambiguous definition of important terms, inconsistency during interpretation, e.g. legitimate expenses, impact of legislation changes on implementation and drawing finance from SF, bad enforceability and compliance with terms stipulated for final recipients".
- A lengthy process of MR and RFP checks before handing them in – several checks are needed, in addition the deadline is not always suitable with regard to the monitoring period, which to a major extent contributes to the insufficient quality of documents prepared by the recipients.
- The requirements for providing redundant or duplicity information, e.g. information that can be found in the application, are repeatedly requested in the MR or RFP, in particular redundant information and documents between the MR and RFP. No duplication of documents would significantly contribute to decreasing the administrative burden not only on the recipient's side, but also on the side of project and finance managers (hereinafter PM and FM).
- Major administrative burden for the recipients (and consequently the MA) caused by the volume of documentation needed for the MR and RFP, which has to be submitted in paper format.
- Documenting the employment status by presenting time-sheets is considered by the recipients as one of major barriers to effective implementation and project administration, also with regard to the fact that filling time-sheets is done primarily

in order to ensure compliance with the project set-up, and it is not done on the basis of the actual hours worked.

- There is no monitoring system in place to measure feedback and feedback solution – responses to queries and complaints are in many cases not delivered, or they are delivered with a big time delay.
- Insufficient accountability of the MA when checking documentation for OP RD&I project implementation – even if the documents (MR, RFP, tender documentation) checked are approved as ok, subsequent checks often reveal irregularities, and it is the recipient who is held responsible)
- MA approach to public procurement (further discussed in Chapter 2.3)

Changes in OP RD&I implementation rules

Recipients are mostly satisfied with the way the project implementation rules are set up, in particular with the logic behind dividing chapters in the Handbook for Applicants and Recipients (including annexes).

However, in the case of changes to the rules and methodology of the OP RD&I the following barriers were identified (negative factors) by the recipients:

- Frequent changes in rules with regard to the actual duration of OP RD&I implementation including many Methodology Instructions (4 versions of the Handbook for Recipients and 12 Methodology Instructions in total); this concerns many projects during their implementation, which results in backdated implementation, while at the same time there is also not enough information about these changes – changes in methodology, definitions, forms.
- Minimum interaction with recipients when changing rules and methodology, and introducing new rules.

Support provided by the OP RD&I MA (documentation, seminars etc.)

The recipients view the support provided by the MA as necessary and essential with regard to the nature of their projects, their financial size, duration of implementation and subsequent sustainability. In terms of how the recipients are satisfied with the support provided, the evaluator can state that most recipients have been satisfied with the information support, although in terms of all monitored parameters a fairly high percentage of recipients were mostly dissatisfied or very dissatisfied.

In terms of individual aspects, recipients are most satisfied with the approachability of PMs and FMs (75% of recipients), on the other hand they are least satisfied with the speed of the PM and FM responses (62%). This result corresponds with the fact that this factor was classed by the recipients as a key success factor of the implementation structure.

In connection with the evaluation of open questions with regard to questionnaire investigation and the outputs of the evaluation interviews and focus groups, specific aspects of recipient dissatisfaction with the support provided by the MA can be divided into the following categories:

- Insufficient or no accountability of the MA and their employees for checking the required documentation (in particular ex-ante checks of tender documentation, but also checking the MR and RFP)
- Non-existence of handbooks for key administrative operation (filling in the MR, RFP etc.)
- Queries sent via e-mail are not answered by e-mail, but over the phone so there is no continuity, and the MA staff cannot be made accountable for providing the information
- Information is often out-of-date and it is provided late, giving recipients no option to respond
- Too much information is provided, or it is redundant or duplicate
- Seminars for recipients are too general – the focus of the seminars is not practical enough, it does not reflect the needs of the recipients, often the quality of the seminars is affected by the quality of the lecturers who do not have sufficient experience
- Non-consistent solution of some identical problems and non-consistent information provided by some of the PMs and FMs – in particular in the case of changes of PMs/FMs, varying and contradictory opinions and statements are provided.

2.3 PUBLIC PROCUREMENT

The issue of public procurement is considered by the evaluator as one of the major barriers to OP RD&I implementation. Public procurement was identified as very problematic in all types of field surveys (both at the recipients', and by the MA staff).

From the evaluator's point of view, the **rules for public procurement are problematic** when the rules go beyond the framework of the Public Procurement Act. This is perceived as a negative step by the recipients, as the whole process is made more difficult and lengthy. The MA does not sufficiently communicate to the recipients the reasons for setting up more stringent rules for public procurement (e.g. preventing discrepancies and related delays with projects[5]).

Ex-ante checks of tender documentation are very important when helping the recipients. The frequent non-compliance with deadlines by the MA during the ex-ante check

[5] In the case of discrepancies in public procurement, where there is a possibility to influence the selection of a suitable supplier, the projects are passed on for evaluation at the Office for the Protection of Competition; the deadline for the Office to issue its statement is several months.

of tender documentation and answering recipients' queries is also perceived as problematic, as shown by the questionnaire survey conducted with the recipients and MA staff. In this respect several factors can be identified that have an impact on the ex-ante check of tender documentation:

- The tender documentation presented for check is in many cases not prepared well or its scope is insufficient (either if prepared by the actual recipient or an external supplier)
- This is an activity the **MA provides beyond the frame of its duties**
- As shown by the field survey, the managing authority **does not have** enough qualified staff who are able to evaluate the presented tender documentation within reasonable deadlines.

In this respect, the **insufficient cooperation** of other specialist MEYS departments, in particular the legal division (department), is clearly demonstrated. Overall, the evaluator values the attempt of the MA to reinforce its legal services as very positive, there is an attempt to employ more personnel with legal education, and to ensure cooperation with an external legal firm (see call for tenders concerning legal advisory services).

As shown by the survey, **successful implementation of tender proceedings is viewed** as fundamental with regard to tenders that are linked to complex and financially demanding projects. In this regard, the non-compliance with rules on the recipients' side must be taken into consideration. The summary report on risk management defines "non-compliance with legislative and procedural rules for public procurement" as one critical risk. In the case of recipients not complying with rules, the managing authority must adopt an optimal procedure resulting in the **elimination of identified problems.** In the first phase it is suitable to use **positive motivation**, which means to intensify communication with recipients and to improve distribution of information. Once it is shown that positive motivation is not effective, it is possible to use negative motivation in the form of **sanctions**. The evaluator views the introduced system of sanctions as positive as it can contribute to the rectification of errors at the recipients' when positive motivation has failed. Non-successful tender proceedings result in significant **extensions of deadlines and late implementation of projects.** Therefore, the evaluator recommends the recipients work hard on ensuring good quality specialist consultancy, in particular legal service, either using own or external resources.

In connection with the selection of the winning supplier, the evaluator views it as positive to be able to stipulate other selection criteria than only the **offer price.** The pressure to decrease acquisition costs, e.g. the cost of equipment, is at variance with the intention of the OP RD&I which is, among others, to equip scientific teams with top and unique technology. In the case of supplier tender, these are **two not quite compactable requirements** and the recipients of assistance perceive it acutely.

Another much discussed topic is how to solve the issue of **project savings** when the recipients have a new duty to not use the 70% of the sum saved on the basis of a construction tender, and de facto transfer it back to the OP RD&I budget. In combination with new rules

for tender proceedings for the recipients, which determine that the price criterion must constitute at least 80% when evaluating submitted bids for construction work, there is quite high potential for large savings. This opens up possibilities to support projects from the project pipeline or to announce more challenges, in PA 3 and PA 4 in particular. This may result in a positive impact, even in the case of the threat of insufficient delivery of goals and monitoring indicators at the programme level.

In terms of strategic management, steps are made that are logical and lead to a higher efficacy of the programme, although on the other hand they might be perceived by some recipients as discontinuity.

The issue of the 70% "forfeiture" of the sum saved thanks to tender proceedings is closely connected with the nature of projects, and in particular with the amount of budget detail provided in a grant application. The sum determined in the Decision is based on the level of detail of the project budget and is the "maximum sum" the applicant/recipient can receive if they do not manage to save through selection proceedings (this is how the amount stated in the Decision is interpreted in most other OPs), or it is a fixed amount which is guaranteed to the applicant/recipient.

If the project is very simple in its nature (the ideal scenario is e.g. purchase of one piece of equipment, or a simple construction), it is legitimate to introduce an approach where a reserve is a non-legitimate expense. Transfers between individual items are not possible at all, or only within a limited amount, and the applicant can only acquire the items stated in the grant application as they are legitimate expenses. This means that the financial sum saved by the recipient by accepting a lower bid than anticipated in the application cannot be further used in the project.

For complicated and complex projects, which the projects implemented within the OP RD&I undoubtedly are, the situation is different. In the case of these projects it is fundamental that all the facts of the project are extremely precise (thanks to the multi-layer assessment system this is by large happening in the OP RD&I). Nevertheless, it is often not possible to prepare a budget that would be detailed and itemised, and would remain the same for the entire duration of the project. It is important to take into consideration the fact that the method of approving projects is a very **lengthy process** which often exceeds the anticipated plan. Scientific development is often so fast that a situation may occur during the project implementation where it is more suitable to use other technologies (equipment) than those projected at the time of creation of the project.

Solving this situation by including the reserve into the project budget is not possible according to the evaluator, as the reserve category is not a legitimate expense pursuant to the "Rules for legitimate expenses for programmes co-financed from the SF and FS for the 2007-2013 programme period" methodology.

It would be fit to mention that it is important to differentiate between two situations that are different from a material point of view.

In the first situation during the implementation of projects, resources that are saved thanks to tender proceedings or a change in technology are transferred to a different part of the budget, where it has been shown that this part of the budget must be increased in order to

be successful in fulfilling the project goals (e.g. by using more expensive technology), but the projects goals and indicators remain the same.

In the second situation the recipient is trying to increase the goals and, in particular, the indicators of projects by using the saved funds (thanks to savings made during the implementation process the recipient is now "trying to build or purchase as much as possible to spend all the allocated funds"). The evaluator does not seem to regard this as a suitable solution as changes in project goals and indicators have a direct link to the programme strategic management. If the managing authority allowed to "build/procure more for the money saved" and to increase the indicators, the managing authority would be losing the opportunity to transfer the saved funds into the areas of support where goals and indicators are not met sufficiently, whereas in other areas of support goals and indicators would be exceeded.

On the basis of the reasons stated above it is possible to allow a certain degree of **flexibility** in project budgets, although it is clear that this approach puts higher demands on checking expenses in terms of their efficiency (checking if the ratio between input and output has been maximised) and purposefulness (checking the necessity of expenses with regard to stipulated project goals) within individual expenses. The evaluator believes that the possibility to use the resources saved during tender proceedings in other parts of the budget is **in principle correct**, but it is also advisable to **limit it.**

In response to the application of the rule to use savings, the applicants and recipients will be forced to pay **more attention** to the financial management of projects, and on the other hand the OP RD&I MA will have funds available that can be used to support **projects in the pipeline**, and to strengthen compliance with the determined goals of the operational programme. The evaluator recommends considering (based on detailed analysis) if the determined limit of 70% of the sum saved is really suitable, and to potentially consider lowering the percentage.

The introduction of the rules stated above has had **major impact** on the implementation system. The introduction of these rules puts **high demands** on the coordination between the Management Division and the Implementation Division of the OP RD&I. On one side it is necessary to consider the impact of these rules on the strategic programme management (including detailed analysis of whether the 70% limit is suitable) in terms of planning financial allocations, and on the other hand there will undoubtedly be increased demands on the staff involved in the implementation process at the start of putting these rules into practice.

2.4 RECOMMENDATIONS

On the basis of the findings and conclusions stated above, the evaluator defined a set of recommendations for individual thematic circles of the OP RD&I implementation as stated in the text above:

1. Internal functioning of the managing authority

The evaluator sees the **stabilisation and strengthening of the personnel capacity of the managing authority** as a fundamental short-term measure.

The evaluator proposes the following measures in this area:

- Completion of relevant qualifications of the OP RD&I MA staff who are in direct contact with the recipients (project and finance managers), including the implementation of internal training and exchanging experience with regard to use of the IS Benefit 7 application.
- Increasing thorough and comprehensive application of mentoring – leading new or less experienced PMs and FMs by more experienced PMs and FMs including passing on experience, consultation sessions and sharing of experience.
- Ensuring good quality specialist consultancy, in particular legal services concerning public procurement, either using own or external resources.
- Creating an internal knowledge database at the OP RD&I MA for the needs of the PMs and FMs in order to ensure the consistency of the information provided with a link to the existing resources and FAQ database, overviews of the most common errors etc.
- Ensuring basic material needs for employees that are necessary for their work (office supplies, computers etc.).

In terms of ensuring efficient functioning of the managing authority, the evaluator recommends **strengthening communication within the managing authority and clearly setting up procedural rules.**

The evaluator proposes the following measures in this area:

- Setting up **clear and easy information channels** not burdened by formalities as at the vertical level (transfer of information from the management to members of staff and vice versa), and at the horizontal level (between individual members of staff and individual departments).
- Defining competencies of the Management Division of the OP RD&I and the Implementation Division of the OP RD&I, to clearly define superior/subordinate positions within individual processes and to strictly comply with the competencies.
- To carry out an **analysis** of how much individual members of staff are **overloaded** in view of further increases in the agenda connected with advanced implementation of the already running projects, and in view of new potential projects. If the evaluator's suspicion that the staff is overloaded (in particular PMs/FMs) is confirmed, to act immediately by increasing personnel capacities or using the services of an external company.

- To carry out a detailed **analysis** on how the OP RD&I **technical assistance** functions. According to the evaluator the functionality of the technical assistance is limited if it is removed from the MA, and if it does not share its needs and requirements. The output of the analysis should be a proposal for optimal integration of technical assistance within departments ensuring implementation of the OP RD&I, including optimisation of processes and deadlines for the implementation of technical assistance projects. Coordination mechanisms should be set up to share the same practice with the department providing technical assistance for the OP EC.

2. Project implementation process

In terms of optimal project implementation, the evaluator recommends making changes in programme management and implementation resulting in **simpler rules and lesser administrative demands**, both at the recipients' and the MA.

In terms of conditions and deadlines for project administration, the evaluator proposes the following measures:

- Over the mid-term horizon to carry out a **comprehensive procedural analysis** (process audit) including setting up deadlines for all key processes at the MA, and to carry out checks of compliance with the already set deadlines identifying processes where it is most common that deadlines are exceeded, putting an emphasis on public procurement and administration of key documents in terms of project implementation (MR and RFP). As a follow up to this analysis, the evaluator proposes to carry out process optimisation, taking MA deadlines into consideration, but also internal deadlines at the recipients' (e.g. getting signatures of statutory bodies). The process analysis should cover the following areas:
  - analysis of compliance with deadlines to pay advance payments including evaluation of the system monitoring compliance with these deadlines.
  - analysis of potential redundancies and duplicities in the documentation presented as part of applications and the documentation presented during implementation (in particular MR and RFP), in order to establish if some documents are not requested twice and if all requested documents are necessary (including evaluation if they must be presented in a paper format, possibility of a higher degree of electronisation during project administration).
- Simplifying the process of approving project changes (with regard to unforeseeable circumstances, changes without important links to the Decision etc.).
- Extending the seven day deadline for ex-ante checks of small scale tenders (with anticipated values smaller than 10% of the project budget or upon compliance with some other condition to be included in this tender category) from 10 to 14 days for tenders announced pursuant to the Public Procurement Act and subsequent compliance with this deadline.
- For MR and RFP reviews to apply the principle used for major changes – the first phase of preparation and commenting on the MR/RFP to be done in Word including

commentaries/revisions and upon approval (or pre-approval of the relevant document) to be transferred into Benefit 7, printed, signed and handed over.

In terms of changes in OP RD&I regulations and methodology the evaluator suggest implementing the following measures:

- **Restricting frequency** of changes in the rules to the lowest level possible. Subsequently, the evaluator recommends informing recipients about changes in sufficient detail – apart from publishing them on www pages, information about the change and its basic characteristics should be sent by the project or finance manager, ideally including methodical instructions on how to deal with the given change.
- **Creating a platform** for the MA and recipients to deal with problematic and disputable areas in the form of an electronic discussion forum (e.g. inspiration can be gained from the ESF forum [6]), involving recipients in the preparation of changes in rules, methodology and new rules – the evaluator also recommends using this platform to discuss the impacts of changes, in particular with regard to the fact that a majority of the projects are already running and these impacts might result in significant changes, and even the impossibility to complete some projects.

In terms of public procurement, the evaluator recommends to conduct an **analysis of rules for public procurement**, and to consider potential amendments to these rules enabling a smooth implementation of public procurement, in particular in the case of procurement of devices and equipment, including intensive communication with recipients of assistance by setting up a "more stringent regime".

With regard to the recipients the evaluator recommends the measures stated below, which can have an impact on negative factors and effect successful project implementation with regard to **internal barriers** in the successful project implementation on the recipients' side.

- Stabilisation of project teams including having experienced members on the team, in particular in managerial positions (e.g. project manager) and in terms of specialists
- Making project management more efficient – implementation of project management
- Ensuring maximum support of the management of superior authorities and institutions with regard to the duration of implementation and operation of projects overlapping functional, or election periods
- Improving incoming and outgoing communication within project teams (in particular in the case of recipients from faculties and universities)
- Using specialist advisory services, in particular legal advisory services during public procurement and grant management services (outsourcing preparation of monitoring

[6] Source: http://www.esf-forum.cz

reports, requests for payment and other documentation) including the selection of relevant service providers with emphasis on ensuring good quality services

In terms of cross-sectional internal barriers regarding sustainability of projects, in accordance with the conclusions and recommendations stated in Chapter 5, the evaluator recommends the MA conducts a thorough analysis of project sustainability with an emphasis on the financial sustainability of projects using a project sample, particularly in projects in an advanced stage of implementation, ideally a comprehensive project sample including the envisaged structure of future project funding. Subsequently, the evaluator recommends that more attention is paid to verification of project sustainability during the approval process and negotiation of other projects.

At the same time the evaluator recommends the MA endeavours to include the option of supporting project operation, in PA 1 and PA 2 in particular, in the proposal for operational programmes for the 2014+ programming period.

In terms of making the MA support more efficient for the recipients, the evaluator proposes the following measures:

- To create and implement a system that will monitor and evaluate recipient feedback and respond to it.
- To create practical handbooks and methodology materials on how to complete the main documents during the project implementation phase (MR and RFP), including a more practical handbook for IS Benefit7+.
- To create sample documents for public procurement – tender documentation, calls for tenders, sample contracts etc., particularly for tenders with a high error rate
- To analyse the most common errors made by recipients and to communicate the results of this analysis – an overview of the most common errors including how to solve them must be communicated to the recipients, but also to the PMs and FMs.
- To increase consultation and advisory support to recipients who are implementing their first project and do not have sufficient experience.
- Regular and systematic communication of the MA and project representatives (e.g. in the form of monthly meetings where news would be discussed, along with current MA initiatives and project problems), and where possible to discuss changes in the OP RD&I methodology and rules, and other aspects of project implementation within the OP RD&I.
- Seminars for recipients should be more practical – solving the most common error areas and recipient errors in individual areas and concentrating on public procurement.

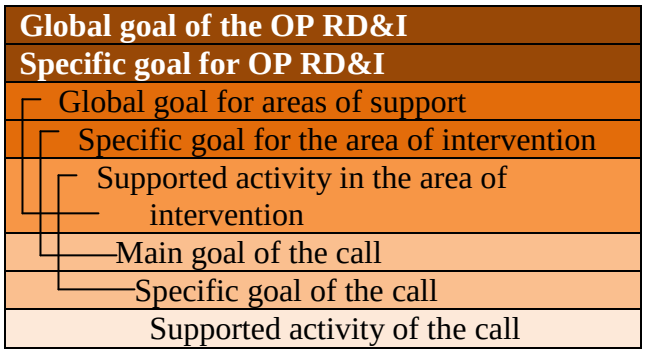
3. FACTORS INFLUENCING MEASUREMENTS AND REPORTING PHYSICAL PROGRESS (SETTING UP AN INDICATOR SYSTEM) AND ASSESSMENT OF THE PHYSICAL AND FINANCIAL PROGRESS

3.1 LINKING THE INDICATOR SYSTEM WITH THE GOALS AND ACTIVITIES OF THE OP RD&I AND ITS TELLING ABILITY

Monitoring indicators are primary tools for the programming process in order to assess physical progress and compliance with goals from the programme level up to individual calls. They are used to express global and specific goals and specific activities in a quantified manner. Therefore it is essential that the creation of an indicator system is an integral part of the intervention programme logic during programming in order to have a **clear link between individual indicator levels and programme goals, priority axis and intervention areas.**

3.1.1 INTERVENTION LOGIC OF THE OP RD&I

In its main features the intervention logic of the OP RD&I corresponds with the standard hierarchy in operational programmes within the CR (see the following chart).



The continuity of the programme logic was partially influenced by cancelling the OP RD&I Implementation Document (as of 16 June 2010) that explicitly defined global and specific goals in the areas of support and supported activities. A major section of key information from the former Implementation Document was transferred into the Handbook for Applicants. The programme document also mentions most of the points, but some of them disappeared from the OP RD&I documentation due to the cancellation of the Implementation Document (see Annexe 2). **Individual levels are not explicitly expressed in the documentation, which might make it more difficult to find its way into the intervention logic of the programme.** However, this is not a problem which might have an impact on programme implementation and it is therefore not essential to adopt correction measures.

The link between individual levels of the OP RD&I intervention logic is different for individual priority axis

- In priority axes 1 and 2 the goals and supported activities of announced challenges are identical with the goals and activities stipulated for the area of intervention (the challenge identically copies the former Implementation Document).
- In Priority Axis 4 the goals and activities of individual challenges are defined in a different way than the goals and activities of the areas of support, but they are directly linked.
- In Priority Axis 3 the announced challenges are actually another level of the intervention logic, which can be attributed to the versatility of the axis. Individual challenges in this axis develop their goals and supported activities into much greater detail than the Programme Document and former Implementation Document.

3.1.2 PROPORTIONALITY OF THE INDICATOR SYSTEM

The differences in the intervention logic of the priority axis as described above are to a certain extent **connected with the structure and proportionality of the indicator system** and its link with goals and activities. In order to evaluate the link between the monitoring indicators and goals and activities and their telling ability of compliance, a scheme of the intervention logic programme has been prepared (see Annexe 2).

The intervention logic scheme depicts the above stated levels of goals and activities of the OP RD&I and the monitoring indicators of impact, result and output. Key levels, where the links between the goals/activities and individual types of indicators should be the narrowest, have been established:

Global goal of the OP RD&I	⟷	Impact indicators
Global/specific goals for the areas of support	⟷	Result indicators
Activities of the areas of support	⟷	Output indicators

In addition to these levels there should be strong links between the result indicators and global/specific goals of challenges, and between the output indicators and challenge activities. The established intensity between these links differs depending on the described differences of individual challenges within the intervention logic of the priority axis (see Annexe 2).

3.1.3 LINK BETWEEN THE MONITORING INDICATORS AND GOALS AND ACTIVITIES OF THE OP RD&I

The **link between the impact indicator** and global goal of the OP RD&I can be assessed as good. The indicators cover the global goal in an adequate manner and express its

key features. In order to increase its telling ability, one can recommend not only monitoring the achieved values in terms of the supported workplaces, but also in terms of supported regions when assessing indicators *110501 – Increase in the total number of acknowledged R&D results at supported workplaces and 110300/110302 – Number of newly created jobs, R&D staff – total/women,* which will help to reveal a possible crowding out effect. An in-depth study for specific projects should be conducted in addition to this simple comparison, and it should be interlinked with ensuring sustainability of the centres in terms of finance and personnel.

On the basis of the prepared intervention logic scheme (see Annexe 2), some **goals and activities were identified that are not covered by the existing monitoring indicators at all.**

No monitoring indicators have been monitored at the result level in order to assess delivery of the following **specific goals for the areas of support:**

Specific goals for the areas of support

Priority Axis 1

- To increase the attractiveness of the given area from the perspective of investment (foreign and domestic) and technological business activities in the given field.

Priority Axis 2

- To speed up the transfer of new findings from the application sector to the education/training process and educational activities.
- To establish institutional platforms for the systematic and long-term cooperation between public research organisations and the application sector (including the cooperation between regional R&D centres and national technological platforms).

Priority Axis 3 – Area of Intervention 3.1.

- To improve the system in place in order to protect and use intellectual property.
- To improve the quality of support given to researchers and students who handle outputs with a commercial potential and who have the potential to participate in the process until they reach a phase usable for commercial applications.
- To increase the economic relevance of the activities performed by Czech research organisations, and to strengthen their systematic cooperation with the entrepreneurial sector and with the users of their results in general (with the application sector).

Priority Axis 3 – Area of Intervention 3.2.

- To improve the effectiveness of the systems and quality of R&D institutions in the CR through introducing new elements for evaluation and for the strategic management of R&D policy.

Priority Axis 4

Specific goals for the areas of support

- To increase the capacity of tertiary education and to create conditions for improving the quality of education of future R&D workers.
- To invest in supporting internal reforms at universities with an emphasis on the complementarity with interventions from the OP EC and strengthening the "third role" of universities.

Priority Axis 5

- To ensure the efficient management, checks, monitoring and evaluation of the programme, including the sufficient administrative capacity of the entities in the implementation structure.
- To ensure solid awareness of the OP RD&I amongst the general public.
- To attain a high level of awareness among potential beneficiaries.
- To increase the absorption capacity of entities for obtaining resources from the European Regional Development Fund.
- To increase the abilities of applicants in regards to project preparation, and to increase the abilities of beneficiaries in regards to project management and implementation.

The following **activities of areas of support have been identified** at the output level **which are not monitored by any of the output monitoring indicators:**

Activities of the areas of support

Priority Axis 1

- Activities focused on strengthening cooperation with leading international research partners (i.e. preparation of joint projects, participation in conferences, seminars, technology platforms, promotion and network activities and materials etc.).
- Activities focusing on strengthening cooperation with the application and public sectors (e.g. preparation of joint projects, networking and promotional events, joint information and communication platforms etc.). - *only a link to result indicator 111200 – Number of cooperation projects of the application sphere and centres of excellence has been identified*
- Supporting other activities leading to delivery of operational goals in the areas of support.

Priority Axis 2

- Activities focused on strengthening cooperation with the application sphere and public sector (e.g. preparation of joint projects, networking and promotional events and

Activities of the areas of support

materials, seminars, setting up joint information and communication platforms, participation in regional and national platforms for cooperation with the public and private sector, including participation in clusters and technology platforms etc.).

- Activities focused on strengthening cooperation with leading international research partners (i.e. preparation of joint projects, participation in conferences, seminars, technology platforms, promotion and network activities and materials etc.). - *only a link to result indicator 110720 – Number of cooperation projects of the application sphere and regional R&D centres has been identified*
- Supporting other activities leading to delivery of operational goals in the areas of support.

Priority Axis 3 – Area of Intervention 3.1.

- Services related to technology transfer, commercialisation and intellectual property protection within research institutions.
- Solicitation of cooperation, promotion and cooperation with the commercial sector (conferences, workshops, etc.).
- Setting up and managing mechanisms to finance verification and initial stages leading to the establishment of technology companies (proof of concept stage): procurement of advisory services and other services, costs related to protection of intellectual property, activities of the organisational unit implementing the project and others; the activity of these financial mechanisms must be related to a research organisation, or to more research organisations.
- Activities of research staff and students in the stage towards the establishment of new technological firms (e.g. spin-off), and the services and activities in connection with their subsequent commercial evaluation.
- Additional activities designed to meet the operational goals of the area of intervention (e.g. networking events with the application sector, professional consultancy, technological audits, cooperation exchanges, technology watch, database of partners for technological development, participation in exhibitions, conferences and seminars, assistance in securing financial resources for new companies, etc.).

Priority Axis 3 – Area of Intervention 3.2.

- Activities designed to improve the accessibility of information on R&D results and trends, particularly in view of the needs of users and the application sphere (e.g. specialised Internet portals, databases, creation of new information channels for R&D, network development, creation of specialised information gateways etc.).
- Activities designed to improve the quality of R&D policies and make them more efficient (individual evaluation of research organisations, international peer review and benchmarking, application of foresight, system evaluation etc.).
- Supporting other activities designed to meet operational goals in the areas of support

Activities of the areas of support

(e.g. exhibitions, road shows, conferences etc.).

Priority Axis 4

- Modernisation and expansion of the information infrastructure of universities essential for research and education (e.g. introduction of new information technology, modernisation and expansion of libraries, provision of information resources including their acquisition, purchase of literature and database licences, networking libraries of the information systems, etc.).

Priority Axis 5 – Area of Intervention 5.1.[7]

- Preparation of the next programming period.

Priority Axis 5 – Area of Intervention 5.2.

- Creation and management of websites.

The above stated specific goals and activities have different levels of importance for the OP RD&I, therefore the evaluator does not deem it necessary to cover all defined goals and activities with indicators. Considering the advanced implementation phase and the already fairly extensive indicator system, the evaluator does not recommend amending the system and creating new indicators unless it's absolutely necessary to cover new challenges The conclusion states there is a non-proportionality of goals and activities coverage and no overall links between the indicator system, and the goals must be reflected when working on programmes for the next programming period. Monitoring indicators fulfil the role of a tool used to monitor compliance with goals and fulfilment of activities and goals, and therefore these indicators should be set up with this vision in mind.

Overall, the coverage of goals and activities of the OP RD&I by indicators monitoring the result and output can be assessed as unbalanced. For priority axes 1 and 2 the coverage by monitoring indicators is relatively good, although the key indicators are linked to the goals of development of research teams and transfer of new knowledge and technologies into practice. A very good coverage by result indicators was identified for Priority Axis 5, however there are no result indicators which makes it difficult to monitor compliance with specific goals of the area of intervention.

The monitoring indicator coverage in Priority Axis 3 was also insufficient, and it was enhanced by the focus of the axis which branches off into a larger number of challenges with different focuses. The initial insufficient coverage also results from the gradual development of axes and their challenges. The monitoring indicators stated in available overviews[8] are

[7] Annexe 2 (Intervention Logic Scheme) does not show all non-binding additional indicators for Priority Axis 5 since there are so many of them that the scheme would become unclear Only the indicators linked to activities that are not covered by any binding indicators have been shown.

[8] Annexe 8e) OP RD&I Applicant and Recipient Handbook – Monitoring Indicators Categories
Annexe 8d) OP RD&I Applicant and Recipient Handbook – Monitoring indicators for projects listed for Priority Axis 3

linked to the challenges announced so far. Currently (from 1 November 2011. to 20 January 2012) projects are accepted for Call 4.3 – Libraries and Information Resources for R&D, for which new indicators were proposed this year and added to the NCI. On the basis of the Updated Indicative Plan of Challenges for the OP RD&I 2011 there should be two more challenges announced this year for Priority Axis 3 (Challenge 5.3 – Improving the quality and effectiveness of R&D policy, Challenge 6.3 – Support of grant mechanisms). Relevant monitoring indicators are prepared for these challenges and their inclusion into the OP RD&I and the NCI is intensively communicated with the NCA (indicators for Challenge 6.3. have been approved by the NCA and MV).

3.1.4 PROJECT MILESTONES

Monitoring **project milestones** is a specific feature of monitoring the OP RD&I. These are the outputs of implemented project activities, they are not based on any uniformed system or code list and they have no link to the standard indicator system. The milestones of each supported project are anchored in the Technical Description (Annexe 23 of the Decision). As shown by the evaluation interviews conducted with the MA staff, compliance with project milestones is monitored by project managers in relation to reporting implementing activities, but it is not provided further to the Monitoring and Communication Department. Project milestones offer a certain potential to enrich monitoring of physical progress, in particular in terms of outputs, and in theory they could be used to **complement output indicators** at a higher than project level.

The sample analysis of project technical description showed that recipients approach the definition of project milestones within the OP RD&I differently. The format of processing milestones differs both in terms of their description, the number of milestones and also the level of detail.

In view of the current fragmented nature and non-uniformity it is not possible to unite them at one level (benefits would be outnumbered by the demanding nature of such process). The only possible way would be to **create a uniformed internal "code list of milestones"** which would include milestones common for a certain group of projects (e.g. by priority axis), and which would provide important information on the physical progress achieved during project implementation. Recipients could choose from the code list, but they would not be restricted by it (upon their discretion they could propose their own milestones in the level of detail they seem fit). The following should be used as **key milestones** that should be monitored at a higher than project level:

- commencement of tender proceedings for construction supplier
- entering into a contract with construction supplier
- start of construction works
- approval that the newly constructed buildings are fit for use
- acquisition and installation of equipment and devices
- full operation of new premises

3.2 LINKS BETWEEN INDIVIDUAL LEVELS OF THE INDICATOR SYSTEM

Compared to other OP systems, the OP RD&I indicator system is rather **specific thanks to its high proportional representation** of result indicators (in particular in priority axes 1 and 2). The logic of linking the result, output and impact indicators and the impact on programme goals and activities shows that the output indicators have the largest representation in the programmes. A majority of OP RD&I indicator results comply with the character of indicators of this type, and they can be regarded as relevant for specific goals of the areas of support.

The link up of output, result and impact indicators can be regarded as relatively good although, as it has been described above, some of the activities and specific goals are not covered. There is a significant link between outputs and results where many of the indicators acquired additional relative indicators that increase the telling ability (e.g. *110502 – Professional publications and* the supplementary *indicator 0606 – Professional publications per 1 researcher (FTE)*).

Compatibility and aggregavity of monitoring indicators is evaluated as good. The indicators that form part of the adjustment rules are set up in a way to enable adjustment. Some indicators are proportional and they are measured in percentage which disables their aggregavity (e.g. *0604 – Share of resources awarded in public tender for specialised support of R&D from state resources).* For these indicators the indicator monitoring the absolute values is also monitored which enables calculations for higher levels, if needed, and therefore the indicating value is not decreased. Indicator *110830 – Share of new infrastructure capacities used by other subjects,* which cannot be aggregated, is the exception.

3.3 IDENTIFICATION CHARACTERISTICS OF MONITORING INDICATORS

3.3.1 ALLOCATION OF IDENTIFICATION CHARACTERISTICS

The monitoring indicators are **described in several places** in the publicly available and valid OP RD&I documentation **with a different degree of specification, stating the key characteristics and information.**

Programme document	- indicator type, code, name, unit of measurement, start value, end value, resource
Category of monitoring indicators[9]	- indicator code, name, method of reporting, period of reporting, binding indicators

[9] Annexe 8e) OP RD&I Applicant and Recipient Handbook – Monitoring Indicators Categories

Monitoring indicators for projects stated in priority axes 1, 2, 3 or 4[10]	- binding indicator, code, name, unit of measurement, definition/description, monitoring, completed in ESOP application, completed in Benefit application, completed in monitoring reports, evidence, reporting period
Monitoring indicators for the challenge[11]	- indicator type, level of priority/project, name, code, unit of measurement, definitions/description, binding

The above stated list of materials and the information available in these materials shows that the OP RD&I monitoring indicators **have all key characteristics determined,** and the detailed information concerning the indicators, their monitoring and evidencing is freely accessible to applicants and recipients.

3.3.2 SUITABLE DELIMITATION OF INDICATORS FROM THE RECIPIENTS' POINT OF VIEW

Primary findings of the questionnaire survey conducted with recipients showed that a **prevailing majority of respondents asses nearly all monitoring indicators as very good or good in terms of the clarity and unambiguity of their definition and monitoring demands.** V

Some problems were identified with regard to the compliance with conditions of research organisations pursuant to the Community Framework concerning the state support of research, development and innovation. Main indicators, that must be complied with and that are used as measures for compliance with the terms and conditions of contractual research and international grants, are as follows:

- *111200 – Volume of contractual research*
- *110300 – Total number of newly created jobs, research workers in total*

In connection with the above and in accordance with conclusions of Chapter 6, the evaluator would like to point out the **high level of risk in terms of uncompleted implementation of some centres or unsustainability of their operations.**

In terms of specific impacts on the management and implementation of centres, the evaluator states the following specific findings for indicator ***111200 – Volume of contractual research:***

- Unclear definition of the indicator with regard to resources acquired by partners from private subjects as part of TACR and MIT Tip projects and other resources.
- The rules for substitution compliance with this monitoring indicator, using a higher indicator level *111300 – Volume of resources for R&D acquired from foreign*

[10] Annexe 8a), b), c) or d) of the OP RD&I Applicant and Recipient Handbook – Monitoring indicators for projects listed for priority axes 1, 2, 3 or 4

[11] Annexe c) – Monitoring indicators for the challenge

resources that measures similar variables is used – securing resources for the operation of centres outside resources from the state budget – a non-binding statement by the MA.

- According to some recipients the monitoring indicator is too ambitious for the time in which it was set, and in order to be reached by 31 December 2015, taking into consideration the state of the economy today.
- A shortage of model examples for the given indicator stated in the Applicant and Recipient Handbook – monitoring indicators

In connection with specific findings, the evaluator proposes the following recommendations:

- **Clarifying the definition of indicator *111200* – *Volume of contractual research*** and stating other model examples.
- **Definition of rules for the possibility to substitute performance of the monitoring indicator *111200* – *Volume of contractual research,*** i.e. how it is possible to substitute a lower than anticipated performance of this monitoring indicator by a higher degree of performance of the monitoring indicator *111300 – Volume of resources for R&D from foreign resources.* The evaluator proposes to reduce the level of substitution and use the substitution option only in PA 1.

3.4 ASSESSMENT OF THE PHYSICAL AND FINANCIAL PROGRESS ACHIEVED

Monitoring and assessing the physical and in particular financial progress represents a basic start for the implementation of the operational programme and making decisions on announcement of challenges. When assessing the physical and financial progress, it is important to keep in mind that these two variables are usually very closely interlinked and that it would be a mistake to assess them separately.

The OP RD&I Managing Authority states that it pays a lot of attention to monitoring physical and financial progress, including compliance with the n+3/n+2 rule. Based on this the following analysis is fairly brief and its nature is more informative in order to frame the situation with regard to other parts of the evaluation.

3.4.1 ASSESSMENT OF PHYSICAL PROGRESS

Compliance with target values of monitoring indicators should only be monitored in the case of main indicators where target values are set. During the assessment the contractor worked with two pieces of data:

1. **Indicator values for projects where Decisions were issued (hereinafter "recipient's obligation").** These data express the anticipated delivery of indicators and they are binding for the recipient. The potential disadvantage of monitoring physical progress of the OP RD&I lies in the fact that quite a large number of

indicators is represented, and their planned value might be difficult for the applicant to estimate, and the consequent delivery of the indicators might be hard to regulate (in particular the volume of contractual research, the number of subjects using the infrastructure, the number of students/staff using the infrastructure). Despite the fact that project outputs are carefully planned and negotiated, the achieved value might differ from the plan in a positive and negative way.

2. **The actual indicator values are achieved** through projects with at least one monitoring report approved. The achieved value cannot be regarded as completely final as some of the outputs, results and impacts must be sustained for the sustainability period. As shown in some other parts of the report, this might be a problem in the case of the OP RD&I, in particular in terms of newly created jobs and the number of operating centres.

As shown in the below assessment of physical progress, and in particular in the relevant tables shown with regard to their scope in Annexe 4, the following indicators are monitored:

- **recipients obligation in %** – the percentage of delivery of the target indicator value via projects with closed Decisions
- **obligation of the recipient with regard to allocation in %** – the ratio percentage of the delivery of target values for projects with closed Decisions and the percentage of drawing down allocation in the given area of intervention / priority axis by projects with closed Decisions * 100
- **achieved value in %** – percentage of delivery of the indicator target value by the actually achieved value of implemented projects
- **achieved value related to allocation in %** – the ratio of percentage of delivery of the target value by the actually achieved value and the percentage of drawing down the allocation by approved RFP in the given area of intervention / priority axis * 100

The indicators monitoring recipient obligations must be taken as key indicators because:

1. with the exception of Priority Axis 5 and partially Priority Axis 2 the projects are in early stages of implementation, and the achieved values are very small or actually zero.
2. comparing the actually achieved value with the drawn down allocation might, to a significant degree, distort projects where indicators are physically delivered in the final stage of projects, or even after their termination, despite of the fact that the stipulated allocation has been drawn down.

3.4.2 DELIVERY OF INDICATOR TARGET VALUES OP RD&I

For programmes in the OP RD&I the impact indicators are monitored, these indicators are taken from the project level (*indicators 110300, 110302 and 110501,* with the exception of *140510*), and context indicators which are acquired from external statistical sources.

Context indicators are used to monitor situations within which the programme is implemented and, apart from the OP RD&I, there are many other factors influencing these indicators. One has to bear this in mind when interpreting the fulfilment of target values for these indicators.

Similarly, the impact indicator *140510 – Increase in the number of PhD students in the convergence region* is subject to multi-factors; the indicator value achieved has even decreased compared with its start value. The intervention of the OP RD&I could not yet be reflected in the indicator value.

Other impact indicators *110300 – Number of newly created jobs, R&D employees – total and 110501 – Increase in the total number of recognised R&D results for supported workplaces* are delivered above average in terms of the obligation (in particular the latter indicator). The most significant crowding out effect can particularly be expected for these indicators, i.e. jobs or R&D results will be shown artificially, or they will be transferred from non supported workplaces as commented upon by approached recipients. The above average fulfilment of these indicators cannot be considered as a sheer success and the interpretation of the achieved values must be supported by further analysis of the available data in the future.

3.4.3 DELIVERY OF TARGET INDICATOR VALUES OF PRIORITY AXIS 1

The delivery of target indicator values of Priority Axis 1 is determined by the progress achieved when nearly the whole allocation of the axis is covered by Decisions, while the actual resources drawn down by implemented projects are quite minimal. All indicators are above average in terms of the obligation.

The exception is indicator *110302 – Increase of newly created jobs, R&D staff – women*, which is not binding for the applicant and it will be assessed once the value is achieved. When looking at the values achieved it is evident that the 34% share of women (see the target share of women in the total number of created jobs) is not complied with (the share of female representation is only 13%). The importance of this indicator is only **marginal** in terms of the overall benefits of the OP RD&I.

The disparity of indicators 110810 and 110820, i.e. the number of researchers vs. students using the built infrastructure, is also interesting. Considering the high coverage of the allocation by Decisions there is quite a high risk that the **end value of this indicator might not be fulfilled.**

3.4.4 FULFILLING TARGET INDICATOR VALUES OF PRIORITY AXIS 2

The implementation of projects in Priority Axis 2 is more advanced than compared to

Priority Axis 1, which is evident looking at the indicator values achieved. A slower fulfilling of the value achieved compared to the allocation drawn through approved RFP can be explained by reaching outputs and results in later stages of the project.

Nearly all indicators are **above average** in terms of recipient obligations. With the exception of the non-binding indicator *110302 – Number of newly created jobs, R&I staff – women*, just like in Priority Axis 1.

3.4.5 FULFILLING TARGET INDICATOR VALUES OF PRIORITY AXIS 3

Priority Axis 3 shows the slowest progress out of all axes, which is reflected in the fulfilment of monitoring indicators. This situation is primarily caused by the nature of the axis which is perceived as an auxiliary and support axis for axes 1 and 2. So far there are only three projects in the implementation stage focusing on information infrastructure, which corresponds with the fact that only the following indicators *132400 – Number of subjects using information infrastructure services for R&D and 132500 – Number of supported projects of information infrastructure for R&D* are fulfilled. According to the obligation these three projects should be enough to meet the end values of these indicators. There are many projects in more advanced stages of assessment in Priority Axis 3 and other challenges have been opened or prepared, however, the progress of this priority axis will significantly improve once these projects start to be implemented.

The remaining indicators with determined end values should be covered by projects from the not yet assessed challenges in the areas of intervention 3.1 and 3.2, and they should be presented for challenges that were or will be announced in the second half of this year, i.e. mainly Challenge 4.3 – Libraries and information resources for R&D.

3.4.6 FULFILLING TARGET INDICATOR VALUES OF PRIORITY AXIS 4

In the case of Priority Axis 4 there is again a major difference between fulfilment on the basis of recipient obligations and the actually achieved value because the indicators of this axis are reported after the completion of projects.

As shown in the table above, the end values of all indicators in this axis should be met without any problems, indicator *110511 – Reconstructed, extended and newly created capacities* will even be above average. Their good predictability is an advantage for the Priority Axis 4 indicators as it can be expected that the obligation of the recipients will really be achieved and maintained.

3.4.7 FULFILLING TARGET INDICATOR VALUES OF PRIORITY AXIS 5

The implementation and use of technical assistance in OP RD&I are accompanied by major problems as discussed in detail in other parts of this report (in particular in Chapter 4.2). However, after changing the projects and their end values these problems are not reflected in meeting the monitoring indicators.

With the exception of indicator *480300 – Number of committee meetings (monitoring, advisory and management),* the indicators are met adequately. The delay with meeting indicator 480300 is not that significant, and it will be realistic to meet the end value if enough attention is paid.

3.4.8 FINANCIAL PROGRESS ASSESSMENT

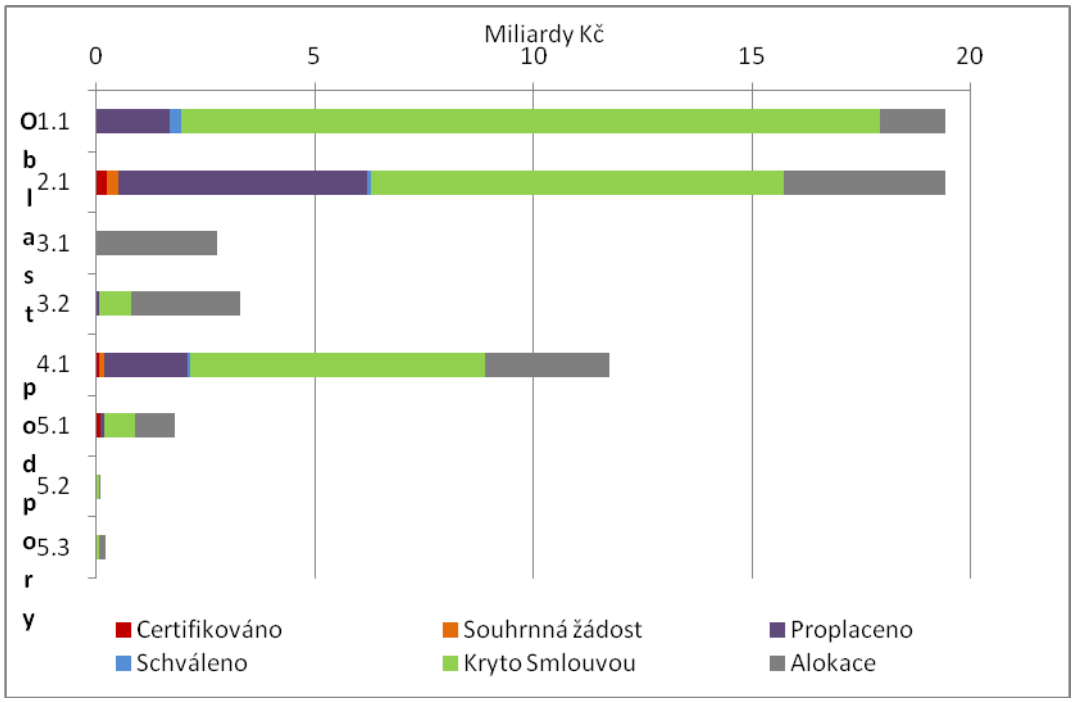
Financial progress must usually be assessed on the basis of several different indicators. In addition to the volume of projects with issued Decisions, the evaluator must monitor expenses from approved RFP, the expenses actually paid, RFP included in the summary request and certified expenses (graphs 1 and 2).

The financial progress achieved in individual areas of OP RD&I support has to a certain degree been indicated above in the description of physical progress. Joint characteristics for most areas of intervention (namely 1.1, 2.1, 4.1 and 5.2 and partly 5.1) is a large (majority) share of allocations covered by issued Decisions, but a small share has been paid out or even certified. Area of Intervention 5.2 – Information and publicity of the OP RD&I is doing the best in this regard, yet still only 12% of the allocation has been paid out.

Zero progress is shown in Area of Intervention 3.1 – Commercialisation of results produced by research organisations and protection of intellectual property; only one challenge was announced and the assessment has not yet been completed (the most advanced projects are in P2 – Project application complied with the conditions of acceptability and formalities which fall into the negotiation phase).

More challenges should be announced for areas of intervention 3.2 and 4.1, these challenges should mean significant progress in the given areas of support.

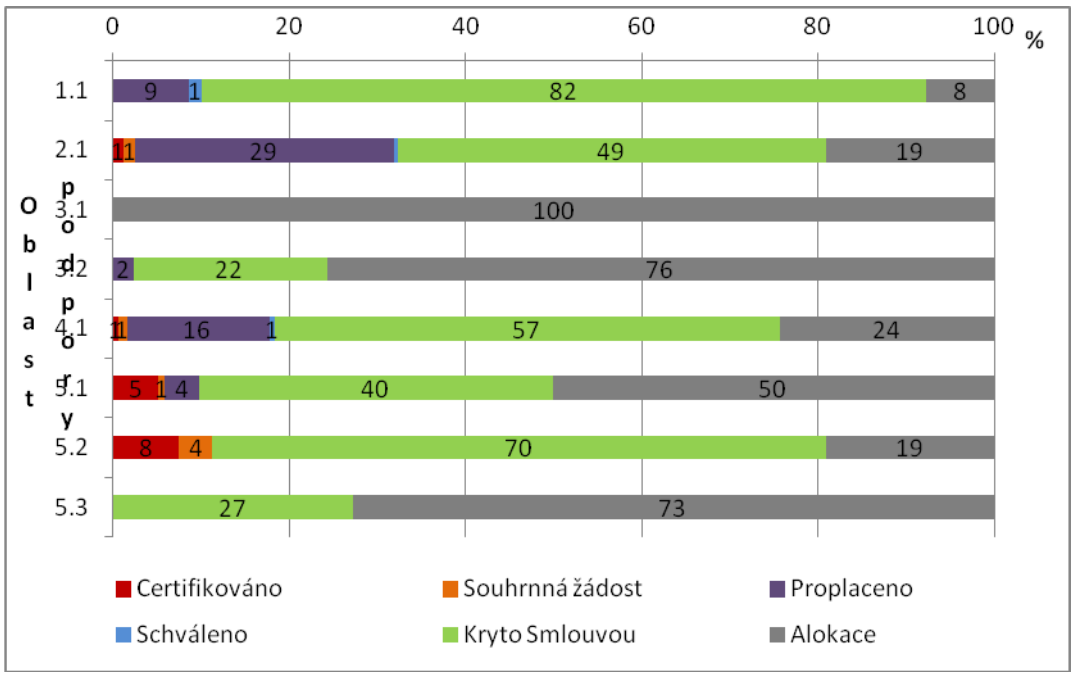
Graph 1 – Drawing down financial allocation in individual Op RD&I areas of intervention – absolutely



Source: MSC2007 – MSC210 print out, as of 27 September 2011

Certifikováno	=	certified
Schváleno	=	approved
Souhrnná žádost	=	summary application
Kryto smlouvou	=	covered by contract
Proplaceno	=	paid
Alokace	=	allocation
Miliardy Kč	=	billion CZK
Oblast podpory	=	support area

Graph 2 – Drawing down financial allocation in individual Op RD&I areas of support (%)



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Miliardy Kč	=	billion CZK
Oblast podpory	=	support area

As shown above, the OP RD&I progress in terms of the allocations covered by issued Decisions is **significant.** The issue is the **minimal share of resources included into summary applications and certified expenses** presented to the EC which represents a significant risk with regard to compliance with the n+3/n+2 rule in the coming years. Therefore it is essential to focus on continuing implementation of key projects (in particular priority axes 1 and 2) and elimination of the risk of further delays.

In 2011 it is currently known that no allocation of OP RD&I for 2007 and 2008 is threatened by non-compliance with the n+3/n+2 rule thanks to deductions of advance payments and annual allocations for big projects. Without claiming these deductions the OP RD&I could not have complied with the n+3/n+2 rule at the end of the year (see Table 1).

Table 2 – Compliance with the n+3/n+2 rule for individual priority axis OP RD&I

Priority axis	The volume of resources which should have been presented for certification in 2010-2011	Resources in summary applications of the accounted PCO	i.e. percentage from the plan of certified expenses	Certified expenses submitted to the EC	i.e. percentage from the plan of certified expenses
PA 1	147,857,190	13,900,000	9.4	9,300,000	6.3
PA 2	640,499,912	493,700,000	77.1	238,400,000	37.2
PA 3	0	0	0.0	0	0.0
PA 4	240,599,903	182,900,000	76.0	67,800,000	28.2
PA 5	473,502,815	112,100,000	23.7	96,700,000	20.4
OP RD&I	1,502,459,821	802,600,000	53.4	412,200,000	27.4

Source: NOK: Monthly monitoring report – October 2011

3.5 RECOMMENDATIONS

On the basis of the findings and conclusions stated above the evaluator defined the following recommendations:

- When processing programmes for the next programming period, it is essential to emphasise the link between determined goals and activities and the indicator system. Monitoring indicators act as tools for monitoring compliance with targets and fulfilment of activities. They must be created with this vision in mind.
- To compare created and recognised RD&I results and the created jobs in supported workplaces with the overall development and elimination of the crowding out effect. This primary analysis should have been complemented by an in-depth assessment of the supported centres, and their results and outputs.
- To create an internal code list for key milestones from which the applicants could select and which would include milestones transferred onto a higher level than the project level.

4. LINKS BETWEEN INDIVIDUAL PROJECTS OF THE OP RD&I

The fact that recipients perceive the **intensity of cooperation** as **higher than the intensity of competition** can be regarded as a positive factor in terms of competition and cooperation between the OP RD&I; more than half of the recipients perceive the intensity of cooperation as high. A much higher intensity of competition can be identified for projects in Priority Axis 2, in particular in regions with a high concentration of regional centres (Ostrava, Brno), in comparison the intensity is much lower in Priority Axis 1.

The most intensive level of competition is at universities, across the priority axes the higher level of competition for other types of recipients is perceived in Priority Axis 2 in particular.

4.1 AREAS OF COMPETITION BETWEEN PROJECTS

The **most important areas** of competition between the OP RD&I projects are as follows (in the order of importance):

- **Competition in the area of human resources**

  Competition in the area of human resources is perceived by the recipients and the evaluator as an **important risk factor for the future** as the range of the human resources available in certain fields is limited, and researchers move between projects being motivated by higher than average salaries.

- **Competition in the area of demand for research results and outputs**

  Competition in the area of demand for research results and outputs becomes important, in **particular in the case of projects in Priority Axis 2**, where the competition is perceived at the contractual research level as a result of support provided to several centres with similar specialisation (biomedicine, nanotechnology, environmental centres, material research centres).

- **Competition in the area of infrastructure use**

- **Internal competition among more projects of one recipient**

  Internal competition among more projects of one recipient is perceived as very high for some of these recipients, in particular with regard to ensuring their subsequent operation after termination of support from the OP RD&I.

4.2 FORMS AND AREAS OF COOPERATION BETWEEN PROJECTS

When assessing cooperation between projects, different forms and areas of cooperation are distinguished.

The following were identified as the main **forms of cooperation** (in order of importance):

- **Cooperation with other projects or projects of the same recipient**

  This form of cooperation clearly prevails for recipients from universities where this type of cooperation is used one hundred percent. This type of cooperation plays a major part also in terms of cooperation amongst different institutes of the Academy of Sciences of the Czech Republic.

- **Cooperation with a project or projects of other recipients in the OP RD&I or projects from other OPs**

  In terms of cooperation with other OP projects, the OP Education for Competitiveness has been identified as the main "partnership" programme. This type of cooperation is particularly used by projects in Priority Axis 2.

- **Partnership with other subjects**

  This type of cooperation is typical for projects in Priority Axis 1 where international partnership plays a major factor (it is also a condition).

The following were identified as the main **areas of cooperation** (in order of importance):

- **Cooperation in terms of exchanges and sharing of experience**
- **Cooperation in terms of sharing of infrastructure**

  A significantly higher level of cooperation in these first two areas is shown by recipients with a higher number of projects, in particular by recipients who implement projects in more priority axes.

- **Cooperation in terms of exchanging project outputs and results**
- **Cooperation in terms of exchanging researchers and experts**

  The development of these areas is expected after the start of the operational phase of the projects, i.e. before the start of operations.

4.3 BENEFITS AND BARRIERS TO COOPERATION BETWEEN PROJECTS

A prevailing majority of recipients assesses the current efficiency of cooperation with other projects and the benefits of cooperation as advantageous, one third assesses it as very advantageous. In terms of **specific benefits**, the recipients define in particular:

- More effective implementation of projects,
- Saving implementation and future operation resources
- Savings in the area of human resources

The main obstacles identified by recipients **in terms of cooperation between OP RD&I projects:**

- Competition between projects (recipients),
- Insufficient coordination of projects if run by one recipient;
- Insufficient support by the MA.

4.4 RECOMMENDATIONS

Although the support of cooperation among more projects by the MA is perceived by recipients as sufficient, the evaluator recommends a **more narrow cooperation between the MA and the recipients**, in particular in terms of good practice examples.

The evaluator recommends recipients increase cooperation between OP RD&I projects by getting involved in the **platform for sharing experience** in the form of an electronic discussion forum (recommendation in Chapter 2.4), which provides offers to share infrastructure, exchange researchers and experts and share examples of the best practice.

5. ANALYSIS OF LEGISLATIVE AND ADMINISTRATION INFLUENCES ON THE MANAGEMENT OF OP RD&I CENTRES, ANALYSIS OF CONTRACTUAL RESEARCH FACTORS

5.1 SUCCESS FACTORS FOR RECIPIENTS IN CONTRACTUAL RESEARCH

Contractual research is a relatively **new topic** in terms of R&D in the Czech Republic, and only a minimum number of applicants and recipients have had some previous experience with contractual research. Recipients believe that the Managing Authority also lacks experience in this area.

Contractual research is viewed as a tool to ensure sustainability of research centres within the OP RD&I, in particular in Priority Axis 2, and partly in terms of centres of excellence in Priority Axis 1, where the ratio of the contractual research to be funded is not that high. Considering the fact that a majority of these centres has no experience with contractual research and that the supported projects are only in the early stage of implementation, the **respondents' statements were mostly about expectations and assumptions.**

All approached recipients pointed out the fact that meeting the planned volume of contractual research might be problematic for many of the supported centres, in Priority Axis 2 in particular. Nevertheless, they stood behind their projects and anticipated that their goals would be met.

On the basis of interviews conducted with the recipients, and on the basis of focus groups, the following **factors were identified which the recipients consider fundamental in order to succeed** in the field of contractual research.

- **Existing contacts for applied sphere and long-term cooperation**

  A key condition in order to succeed in the field of contractual research is making long-term contacts with the application sphere. Some of the recipients have contacts and established cooperation from previous activities and projects which is an important prerequisite in order to succeed in the field of contractual research.

- **Good quality human resources to start cooperation with the applied sphere**

  Establishing contacts with the application sphere and an intensive build up of demands for contractual research must be the work of a **separate department or member of staff** within the implementation team. The existence of this department or member of staff is expected for projects in priority axes 1 and 2. It is essential that recipients emphasise ensuring good quality human resources for these positions, and on involving them in the operation of centres in good time.

- **Competitive offers and suitable research focus**

It can be anticipated that an important barrier for meeting the planned volumes of contractual research will be the competition between projects, or centres with a similar research focus.

- **External economic impacts**

  The economic crisis has undoubtedly influenced this area. Some of the approached recipients stated that they lost some of their clients, where cooperation had been agreed, as a result of the crises. This makes the importance of efficiently coordinating the focus and activities of the supported centres when searching and making contacts in the applied sphere even clearer.

Recipient comments on the impact of the economic crisis contrasts with the development of R&D expenses in the CR to a certain extent (see Table), where expenses for R&D carried out by the university sector and funded by the business sector significantly increased in 2009 and 2010.

Table 3 – R&I expenses in the CR (million CZK)

Implementing Sector / Financing Sector	2007	2008	2009	2010
Universities/Business (private, state resource)	67	57	106	113
Universities / private foreign resources	5	3	1	6
Universities/government (state budget)	8,387	8,256	9,076	9,216
CR total	**54,284**	**54,108**	**55,350**	**59,033**

Source: CSO: R&D data in the Czech Republic for 2005-2010

5.2 LEGISLATIVE AND SYSTEM INFLUENCES IN THE AREA OF MANAGEMENT OF CENTRES SUPPORTED BY OP RD&I AND INTERNATIONAL GRANTS

Unclear rules for the implementation of contractual research and the inexperience of recipients and MA staff with this type of research can be identified as the first cross-sectional factor of legislative and system influences on the management of centre supported by OP RD&I – recipient views are united in this respect with regard to PA 1 and PA 2.

The second cross-sectional factor is **ensuring sustainability of outputs, results and impacts** of projects which is perceived, in particular, in terms of connection with ensuring the volume of contractual research.

Recipients view the support of contractual research as insufficient, although the first programmes and initiatives have started to appear – for example the Innovation Voucher programme, which aims to support cooperation between businesses and scientific and research institutions in Brno, enables receiving a grant of up to CZK 150,000 to cover the services of Brno research organisations and institutions.

A major cross-sectional risk aspect of management of centres supported by the OP RD&I is the **unclear and uncertain sustainability of OP RD&I projects with regard to their funding** after the termination of support; there are several key factors involved:

- Contractual research has a smaller share in future funding of these centres, and the share for centres in PA 1 is significantly lower.
- Despite the great deal of recipient optimism only a small number of recipients have any experience whatsoever with contractual research or similar research, and this applies to ensuring contractual research in terms of making binding obligations.
- One can expect a high level of competition between research centres, particularly in regional centres due to their specialisation (e.g. there are several centres specialising in environmental issues, several centres specialising in material research and development, many centres specialise in biotechnology and medicine).

5.3 ISSUE OF PUBLIC SUPPORT WITH REGARD TO CONTRACTUAL RESEARCH

The support provided to centres of excellence and research centres in priority axes 1 and 2 of the OP RD&I is not regarded to be public support. However, the private sector is indirectly supported via contractual research which might bring doubts about the existence of public support.

The Applicant and Recipient Handbook for priority axes 1 and 2 mentions public support in this respect stating that the support provided directly is for non-economic activities, and if the recipient offers its goods and services on a market, it is essential that the recipient separates its economic and non-economic activities.

Support provided indirectly, i.e. services provided to third parties must be offered on a non-discrimination basis, under equal marketing conditions. If recipients cooperate with businesses the following conditions must be observed:

- Intellectual property and other results will remain with the research institution or they are freely distributable.
- Business/es pay for all project costs.
- Business/es pay the market price for intellectual property, i.e. the research organisation acts as a market investor (costs paid by the business to the research organisation can be deducted from this price).

- If conditions 1-3 are not met, the OP RD&I MA can potentially approve an agreement made by and between the research organisation and the business, on the basis of which the business will offer a counter value for the access to results and intellectual property.

To gain experience on how this type of intervention is dealt with abroad with regard to the public support issue, foreign studies from three selected countries have been prepared – Denmark, Ireland and Norway (the studies are listed as Annexe 5). The first step was to identify countries with experience with the issue of public support with regard to supporting research organisations and their cooperation with the application sphere. On the basis of the initial approach of partnership organisations within the European Network for Social and Economic Research, the aforementioned countries have been selected. Consequently, partners in these countries selected a specific programme or initiative which is the closest to the support logic for the development of centres and consequent contractual research in priority axes 1 and 2.

The prepared studies showed that interventions with similar aims are **not considered as public support even abroad.** At the same time it is clear that the managing authorities of these programmes have been discussing the issue of public support at great length and were consulting this issue with the European Commission (i.e. in the case of Norway with the European Free Trade Association).

5.4 RECOMMENDATIONS

On the basis of the findings and conclusions stated above, the evaluator defined the following system recommendations:

- **To determine clear and comprehensive rules for contractual research including practical and model examples** of operation of this system in the CR and abroad – case studies.
- **To carry out complex analysis of OP RD&I project sustainability after termination of support from the OP RD&I**, including **verification of the overall absorption capacity of projects** (e.g. the total of monitoring indicators regarding students and research staff – if the numbers of students and researches are at all achievable, in particular with regard to newly created job positions).
- **To prepare a crisis scenario** with regard to delays of important project parts, considering the number and volume of projects, and their partial or incomplete application in operation including the impact on delivering programme goals.
- To support creation of a platform to share experience with project executors in order to eliminate the risk of not delivering the volume of contractual research and threatening sustainability of centres (creating a platform has already been mentioned in Chapter 2.4).

Furthermore, the evaluator defined recommendations for recipients:

- To concentrate on having a department or member of staff who would systematically build cooperation with the application sphere and demand for contractual research.
- To build cooperation with the applied sphere on a long-term basis before the operational start of a centre, which is closely connected with the timely appointment of the aforementioned member of staff.

6. THE IMPACT OF THE IMPLEMENTED RD&I SYSTEM REFORM IN THE CZECH REPUBLIC ON THE IMPLEMENTATION OF THE OP RD&I, ALTERNATIVELY OTHER FACTORS INFLUENCING OP RD&I PROJECTS (CHAPTER 6)

The analysis of Reform impact is based on the analysis of relevant documentation and data analysis, the issue has been covered by evaluation interviews with the recipients, and in particular by the panel of experts (for further details see Annexe 8).

6.1 DEVELOPMENT OF A SYSTEM FOR FINANCING SCIENCE AND RESEARCH IN THE CR FROM THE TIME OF PREPARATION OF THE OP RD&I AS A RESULT OF THE REFORM OF THE RESEARCH AND DEVELOPMENT FINANCING SYSTEM IN THE CR

One of the main results of the Reform is **making the system of financing research and development in the CR clearer;** the chapters used to finance research and development in the CR have been reduced – in 2011 there will be 11 instead of the 22 chapters at the start of the Reform, and the final state should be approximately 7 chapters. The evaluator views this clarification of the system as a step in the right direction, similarly the other major result of the Reform, which is establishing the **Technology Agency of the Czech Republic (TA CR)** is assessed positively, and the agency should focus on financing applied research, which has become a vital new part of the system of financing R&D. It will be necessary to build essential structures within the TA CR and to further cooperation with other providers of R&D resources, but this is clearly a positive step which is regarded favourably by both the professional public and OP RD&I recipients. In terms of R&D support, there is a **gradual transfer of the R&D support to professional agencies** in accordance with the objectives of the Reform – the Grant Agency of the Czech Republic (GACR) and the Technology Agency CR (TA CR), however a major part of the R&D funds are still controlled by the ministries (in particular the Ministry of Trade and Industry and the Ministry of Health Care).

However, the fundamental starting point of the **Reform has not been met – the financial framework has not been complied with, the 8% increase in resources for R&D has not been fulfilled**, which clashes with R&D funding including the OP RD&I – these premises were included in the preparation of the OP RD&I. The problem is the understanding and in particular **measurement of scientific and research work in connection with further funding of the already running projects** and acquiring other means for R&D projects, not only for projects financed from the OP RD&I – so far no methodology for objective evaluation of the quality of scientific and research work was prepared, and only partial metrics were reflected within the OP RD&I (results of projects in connection with the RIV). **The existing methodology of measuring R&D results is a positive idea and a step forward** which determined certain optics for measurement of R&D results, but there is no

analogy abroad and the response of the professional public is incongruous. A major disadvantage of the methodology is its **validity across sections for all fields** which lowers its usability – **it does not reflect the specific nature of individual fields.** Another major disadvantage of the existing methodology is the fact that it is binding for two consequent years with regard to the stipulated legislation.

Overall, the link between the OP RD&I and the Reform can be viewed from a certain angle as **a non-system step which brought features of specific funding into the existing institutional funding system**; the volume of resources for the OP RD&I is quite significant in comparison with the resources for the institutional system of funding.

The impact of the Reform and the OP RD&I on funding R&D **will be, in particular, significant in 2013-2014** when a major part of the OP RD&I projects will go into the operational phase and recipients will have to find resources for funding the operation, which will be fundamental in particular for projects in priority axes 1 and 2 where the following funding structure can be predicted:

- PA 1 – primary source of funding will be the state budget, consequently foreign resources and to a lesser extent contractual research
- PA 2 – contractual research should be a much more important source of funding and also foreign resources (including Framework Programmes and international grants) for recipients

The problem of securing other funding for projects supported by the OP RD&I particularly lies in the fact that **co-funding through contractual research and foreign resources implies a great level of unpredictability** (in terms of contractual research we can particularly expect a high level of competition amongst regional centres, while there might be some funding from structural funds within the OP for international grants, the competition principle for projects will apply in the CR).

6.2 IMPACT OF THE REFORM ON THE IMPLEMENTATION OF OP RD&I AND OP RD&I PROJECTS

Another important aspect of the Reform impact on the implementation of the OP RD&I and OP RD&I projects is the fact that the **Reform was reflected in the OP RD&I proposal and consequently in the procedural documentation for the OP RD&I,** which on one hand determines the significance of the Reform for the OP RD&I, but on the other hand is also one of the factors why the OP RD&I implementation is delayed.

The impact of changes in the funding system on the recipient is different for universities, the Academy of Sciences and other R&D subjects involved depending on the project type – the RIV recalculation significantly affects the calculation of resources for the future compared to the five year average that is already in use. Centres in PA 1 and PA 2 in the OP RD&I were assessed on the basis of combination of past and future results (what will

be created and achieved) compared to the institutional support of R&D, where assessment is done on the basis of past results only. This is connected with another problematic area of the Reform and its connection with the OP RD&I in the **methodological ambiguity of measurable "hard" results of OP RD&I projects,** in particular in the case of **gross jobs** where, based on the experience of recipients and experts, approximately 80% of gross jobs are created as part of transfers, and only the remaining 20% are newly created jobs.

The evaluator points out the fact that if the Reform is not delivered this might seriously threaten the position of universities – the **reform of universities resulted in concentration on quantity of outputs in science and research**, teaching is still done on the basis of directives and, contrary to the assumptions of the Reform, there is still a big delay with introducing the assessment of teaching quality at universities.

In addition to the impact of the Reform on the OP RD&I implementation, it is possible to assess the **impact of OP RD&I implementation on the Reform** when a major part of the R&D resources is mandatorily bound so the system dynamics is very low, on the contrary the OP RD&I is allocated by projects and in terms of volume it is significantly higher than the "standard" system of funding.

A major impact of the Reform was the **possibility to create consortiums as legitimate recipients to implement centres of excellence,** their **legal anchoring is still insufficient** (associations, or consortiums do not have independent legal subjectivity).

Recipients perceive the Reform differently based on their character, overall they positively **view the fact that the Reform as such exists and they perceive the subsequent parts of the Reform** positively in terms of its impact on OP RD&I implementation, and OP RD&I projects.

- **To include the OP RD&I into the Reform and the possibility to receive support from the OP RD&I** to fund projects could not be otherwise implemented at all, or within a smaller scale, or within a longer time horizon.
- **To simplify and make the system of R&D support** clearer, attempt to achieve a higher degree of objectivity when allocating resources for R&D
- **To make TA CR** an institution that is going to secure support for applied research

Recipient experience with the impacts of the Reform, and their opinions on the impacts of the Reform are mostly negative, primarily in the following aspects:

- **Non-compliance** with the basic premise of the Reform **– to increase resources to support R&D by 8% per annum**
- **Concerns about the overall move of science funding towards decreasing the volume of grant programme** (TACR, GARC, MIT and other providers)
- **Concerns about insufficient impartiality of the TA CR and GA CR when allocating resources** to support R&D (concentration of a large volume of resources on only two institutions)
- **OP RD&I,** which is part of the Reform, **secures resources only up to the implementation phase** and it is up to the recipient to ensure funds for financing the operation, which will result in significant competition pressure and might endanger the

operation of projects built with OP RD&I support, and the operation of institutions which do not draw OP RD&I support.

6.3 RECOMMENDATIONS

On the basis of the findings and conclusions stated above the evaluator defined the following recommendations:

- To **update the methodology for measuring research and development** results and to include specific features of individual scientific and research fields in connection with other potential funding of R&D projects.
- **To include into the proposal for operational programmes for the 2014+ programming period funding at least some of the infrastructure operation created as part of the OP RD&I** (in particular centres of excellence and regional centres), and also supporting the **cooperation of the business and research spheres** – primarily in the area of contractual research including the option to receive support for services provided to businesses as part of the contractual research.
- **More intensive cooperation between the MA, or the MEYS, and the TA CR in terms of contractual research,** its legislative anchoring and support for OP RD&I recipients as part of PA 1 and PA 2, and the users of contractual research.

Furthermore, the evaluator defined recommendations for recipients:

- To maximise efforts to secure funds for the operation of OP RD&I projects other than from the state budget, in particular from community programmes, and to start preparation and partnership in good time before the termination of implementation of OP RD&I projects, in particular in PA 1 and PA 2.

7. AVAILABILITY OF GOOD QUALITY HUMAN RESOURCES TO MANAGE THE ADMINISTRATION OF OP RD&I PROJECTS

The availability of good quality human resources is a fundamental part of absorption capacity for the preparation and subsequent management of projects. It is essential to be interested not only in the internal human resource applicants/recipients, but also providers of relevant services (legal services, processing project applications etc.), as their availability and in particular qualifications influence the quality of presented projects and their implementation. The importance of good quality human resources for the administration and management of projects in the OP RD&I have been confirmed by the results of field surveys, which determined that in some of the projects this issue was underestimated and created problems that had to be dealt with on an operative basis.

In accordance with the brief, the analysis focused on two key factors influencing the quality of human resources involved in the OP RD&I projects and influencing the quality of project teams as a whole. It initially focused on the issue of availability of relevant experts on the job market and their position, and secondly the evaluator focused on the offer of further professional qualifications related to project management and administration.

7.1 POSITION OF RELEVANT PROFESSIONS ON THE JOB MARKET AND THEIR AVAILABILITY

Projects implemented as part of OP RD&I are more or less characterised by the immense complexity of the issues involved, which puts bigger demands on the project team who should manage and administer the projects. Compared to other projects implemented in other operational programmes, it is essential to compile a project team within the OP RD&I which will include staff working on the physical contents of projects (scientific staff) and administrative staff.

The questionnaire survey conducted with the recipients showed that the average size of a project team is sixteen full time employees, but it is important to take into consideration the fact that the situation might vary in individual teams (project teams for large projects might include more members, and smaller projects in Priority Axis 3 and 4 can have only a one member project team).

Out of all project team members, the surprising number of 60% are permanent staff members of the recipient. The staff employed for the implementation of the project only represent 38%, and external members of staff represent only 3%. This data was influenced by the fact that all staff employed by the recipient at the time of the survey were considered permanent staff (at the moment of the Decision issue).

Therefore, it can be stated that most recipients try to use **own capacities** for the implementation and management of projects.

The most common category in the group of permanent staff are scientific workers, specialists and experts who form more than 54% of the category. Another category within the permanent staff group is represented by managers from scientific and development departments, approximately 16%, of which economists and accountants represent approximately 13% and lawyers and legal advisors represent less than 3%. Other categories within the permanent staff not mentioned above form more than 14%. The categories that were specified by the respondents were administrative staff, technicians and building specialists.

Categories within the group of staff employed for specific projects are relatively similar. The share of scientific workers, specialists and experts is even higher (although only marginally), whereas the share of managers of the scientific and development departments, economists and accountants is lower (more than 11% and less than 6%). The percentage for lawyers and legal advisors is exactly the same, but other categories, which again comprise administrative workers, and possibly technicians, is significantly higher (nearly double – slightly under 26%).

A major conclusion can be deduced from the data shown above, i.e. recipients are forced to employ **new scientific workers** in order to implement projects as the existing capacities are not sufficient in this regard, and these scientific workers form a majority part of the employees contracted for specific projects. Furthermore, it is possible to deduce that recipients try to involve the **maximum number of own resources** in project teams and even in non-scientific professions, even though these members of staff are not always available. To illustrate this situation, on one side we can state the data for the economist and accountant category (it is justified to assume that most respondents understood the profession of an economist in its narrow meaning, i.e. an employee of the finance department at the faculty), and on the other hand the data for administrative workers (who most respondents understand as grant advisors, managers etc.) who were employed for the purpose of project implementation and who formed the dominant part of the Other Staff category.

The questionnaire survey also included external suppliers' staff into the employee groups. As shown by the very low numbers in this group (the average number of full time employee contracts provided by external suppliers represented only 0.4), most respondents were not able to convert the work of external employees into full time contracts, and therefore the data provided for this group must be treated with caution. Nevertheless, respondents who listed these staff in the questionnaire survey often stated that this is the Other Staff category (administrative staff – grant advisors, or construction specialists and technicians) and lawyers and legal advisors. These results are in accordance with the fact that many recipients have an increased need to use the services of lawyers and specialists in EU grant administration at the time of project implementation, these services are often sporadic, and therefore external companies are approached to provide these services.

The evaluator believes that it would be advisable to **harmonise scientific workers** within implementation teams of projects co-financed from the OP RD&I who are responsible for the physical side of the project on one side, and **specialists in legal, economic and grant aspects** of the project on the other side. On the basis of the findings of field surveys and the analysis of problems during communication of the recipients with the MA of the OP RD&I it

is evident that often it is not possible to **ensure sufficient cooperation**, in particular in the case of complex projects of large financial volumes.

According to the evaluator in this respect it is not advisable to determine the ideal structure of the implementation team, not even to determine which positions permanent members of staff or the external staff should assume, although for some positions it is determined beforehand how they will be staffed (external staff are, in particular, providing services in the field of grant management or legal management). It is important to point out the importance of **regular communication** within project teams using flexible communication means, and in particular, the fact that the attention the **top management of the recipient** pays to the project is vitally important for the operational quality of the project team.

In this regard it is advisable for the OP RD&I MA to point out problems which are not adequately dealt with by the recipient, as it can be assumed that improvement will be made in many cases. To illustrate this approach we look at the implemented sanction system, whereby upon a problem caused by bad coordination within the project team it is advisable to send a notification of impending sanctions to the statutory representative of the recipient who, in most cases as assumed by the evaluator, will try to address the situation quickly.

In the questionnaire survey the respondents answered the question regarding the job market situation in the CR in terms of professions necessary for the implementation of projects as part of the OP RD&I, i.e. availability of selected professions in terms of recipients. Respondents commented on the following categories: scientific workers, specialists and experts, lawyers and legal advisors, economists and accountants, and other professions.

Respondent views were not surprising, as deemed by the evaluator, and in fact they confirmed the hypothesis that the **biggest problem is the availability of scientific workers, specialists and experts.** Only approximately 4% of respondents marked the availability of the aforementioned jobs as good on the Czech job market, on the other hand approximately 52% of respondents expressed their views that the availability of these jobs is bad, and 13% of respondents marked the availability of scientific workers as very bad.

On the other end of the spectrum there were economists and accountants whose availability is very good or good as marked by 91% of respondents, none of the respondents marked their availability as very bad. Lawyers and Other Staff were somewhere in between scientific workers, economists and accountants in terms of their availability.

Projects co-financed from the OP RD&I have demonstrated the issue of the **long-term shortage of scientific workers** in the CR, specialising in certain fields, and there is a great deal of competitiveness between some projects (i.e. "tempting away top scientific workers") as shown by the survey results. A shortage of scientific workers in certain fields has several interlinked causes and it should be a subject of an independent analysis, however it is necessary to state one important cause here which is the level of support for science and research provided by the state in comparison with other advanced EU countries (or the US).

The questionnaire also looked at the issue of searching for new members of implementation teams for projects co-financed by OP RD&I, and the respondents could state more ways of looking for new staff. A majority of the respondents stated that new project

team members were selected based on personal contacts or they were transferred from another position within the recipient organisation; these responses did not come as a surprise.

Quite a few respondents (approximately 24%) took advantage of job portals that have undergone a boom in recent years, and that now represent one of the most important tools for applicants searching for employment and for employers looking for potential employees. The evaluator did not examine the relationship between the method of selection and positions of new members of project teams, but it would be justified to say that job portals were used to search for staff such as accountants, administrative workers etc., i.e. staff well represented on the job market. Other methods of searching for new members of projects teams were only represented marginally in comparison with the other aforementioned methods.

Project teams must deal with various issues which require a flexible approach. According to the evaluator, it is possible to divide the issues into two main groups:

1) one group is connected with matters regarding the physical orientation of projects, i.e. the concept of scientific and research work,
2) the second group is connected with securing grants for projects, including monitoring and reporting, and therefore it is more connected with checks and monitoring by the OP RD&I MA.

The evaluator believes that it is necessary to pay extra attention to problems connected with the concept of the scientific-research work as these problems are very often connected with the issue of **project sustainability**, which is very important for the OP RD&I (this is discussed in detail in previous chapters).

The problems of projects teams, as stated by respondents in the questionnaire survey, can be divided into two groups.

One of the major problems listed by the respondents for the first group was the **fluctuation of project team members and difficulties with recruiting new members.** This problem is probably connected with the conditions set by recipients for project team members, and it is not within the power of the OP RD&I MA to change it in any major way. In terms of the second group of problems, recipients stated problems connected with **bad coordination of work within the team or relationships between the project team and management of the recipient** (university management). These problems to a certain extent arise from the character and complexity of projects supported from the OP RD&I. The RD&I MA can help solve these problems at least partially, e.g. by **organising a seminar** where recipients can share examples of good practice in terms of project team coordination, or by **creating a joint portal** where recipients and potential applicants can share their OP RD&I issues.

During the analysis of availability of relevant professions on the job market, the evaluator worked in particular with statistical data on the number of applicants and available jobs as published on the statistical portal of the Ministry of Labour and Social Affairs. Results of a short-term analysis of Internet job portals were added to this data, the analysis covered mostly the number of open positions available as there is only a very limited amount of data available on the number of applicants searching for certain jobs via Internet job portals. The

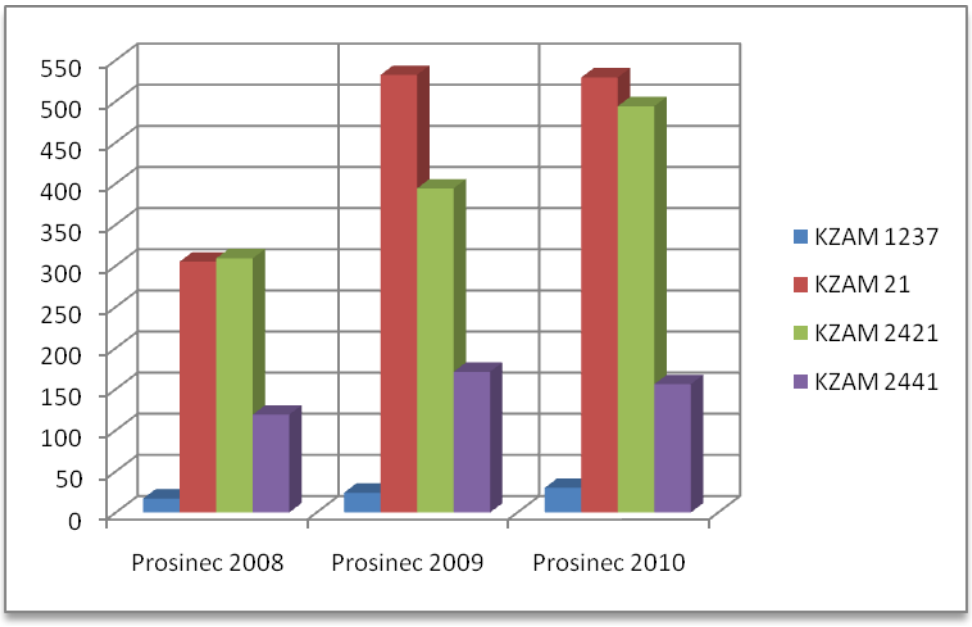
evaluator dropped the idea of analysing data on job agencies as the results of the questionnaire survey clearly showed that this method of searching for new project team members was only used by a very small number of recipients.

Relevant employment categories (hereinafter ECs) are as follows: managers of scientific and research departments (1237), lawyers and legal advisors apart from attorneys and judges (2421) and economists – scientific workers, specialists and experts (2441). The defined categories were used by the evaluator in the questionnaire survey so that the results of the questionnaire survey can be applied within the context of analysis of statistical data from the MLSA statistical portal. In addition to the aforementioned four digit ECs the evaluator analysed the two digit ECs (scientists and physical and related sciences specialists), which covers most specialist employees in individual projects.

Statistical data from the MLAF are published on regular basis, however the major problem with this data is the fact that they only include data on applicants and available jobs reported to job centres, i.e. administration and project management professions in the OP RD&I, which represent a small number of total jobs and applicants.

The official statistics on the job market (job applicants and open positions) have been monitored by the evaluator since the end of 2008 (see Graph 3 and Graph 4), which is the year the economic crisis started showing its impact on the job market and also the year when the most important projects within the OP RD&I were nearly completed.

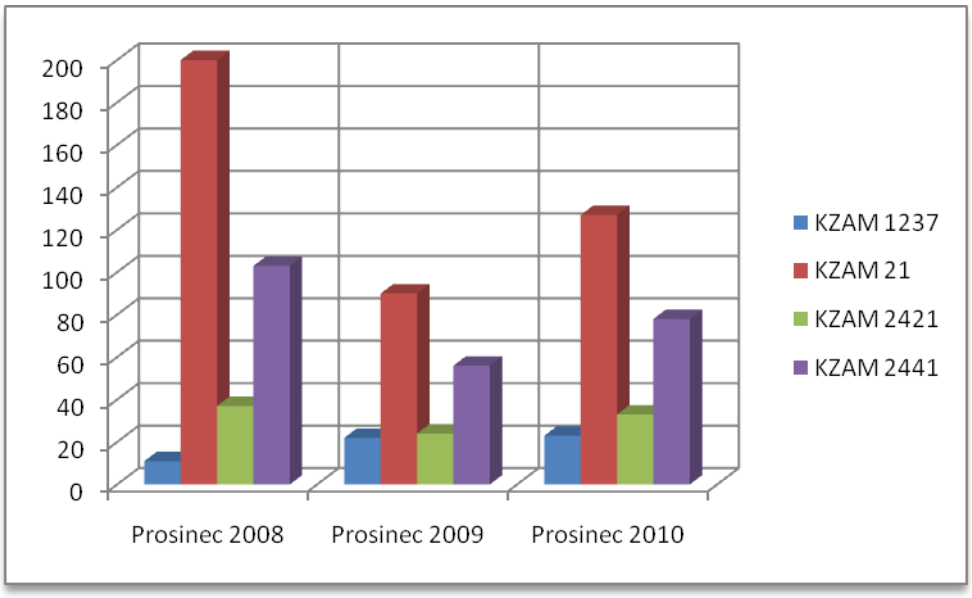
Graph 3 – Development of job applicant numbers for selected ECs



Note: For better clarity, the number of applicants for EC 21 and EC 2441 are shown in tens

KZAM	=	EC
Prosinec	=	December

Graph 4 – Development of available job position numbers for selected ECs



Note: For better clarity, the number of available jobs for EC 21 is shown in tens

KZAM	=	EC
Prosinec	=	December

Despite the problems with the official statistical data stated above, the presented graphs clearly demonstrate the changes that have occurred on the job market; there was a higher number of job applicants in 2009, and this was followed by stagnation, or a slight increase or decrease in 2010. With regard to the number of job positions, the distinctive decrease in 2009 was replaced with a significant growth in 2010 as the economy revival started generating new jobs, even in the professions monitored by the evaluator.

However, ECs 1237, which is fundamental in terms of project implementation in the OP RD&I, does not follow these trends. It is important to mention that the absolute numbers involved in this group are very small, so constructing statistical indicators for development trends is highly problematic. It is particularly important to bear in mind that the difference between the official statistics and the actual situation on the job market (i.e. between applicants / available jobs registered by job centres and applicants / actual jobs) is probably most distinctive in this group, and it is thus not possible to subject this group to a more detailed analysis.

Internet job portals have become a major tool both for job applicants and employers in recent years. After a short analysis of available jobs on the most used job portals (with regard to the examined positions, the most relevant job portal is jobs.cz), it has been confirmed that these portals are very often used by public organisations (public research institutes and universities), and by private businesses. The evaluator also found several job positions for projects co-financed by the OP RD&I (Priority Axis 1), although not for all positions listed by recipients of Priority Axis 1.

Overall, the situation on the job market with regard to **science and research** in the CR can be characterised as fairly **unbalanced,** as on one hand there are fields with many employees, and on the other hand there are fields with a significant lack of primarily managerial scientific staff. With regard to the proportion between the public and private sphere, according to the official data (Czech Statistical Office) the **public sphere still dominates** in the case of scientific workers (defined as a university and governmental sector), although the share of the private sphere is growing, apart from during times of economic crisis. In terms of other professions essential for the management of the OP RD&I (lawyers, accountants, economic experts), according to official statistics the situation can be classed as **satisfactory** from the recipient standpoint.

7.2 EDUCATION POSSIBILITIES

Further education of relevant project team members is a very important prerequisite for error free management and administration of projects within the OP RD&I. During analysis of education it is important to distinguish between systematic studies preparing for a future profession (for most of the OP RD&I staff at universities) and further professional education.

With regard to systematic studies to prepare for a future profession, it is important to distinguish between professional (physical) project guarantors and staff responsible for project administration. Whereas in the first case this regards mostly scientific workers, in the second case it could be a variety of employees, some of which do not need a university degree to be included in projects co-financed from the OP RD&I (for example accountants). For the second group of employees it is important, in the evaluator's point of view, to gain practical skills during their studies.

Despite of the fact that on the basis of many experts (e.g. Ryška, Zelenka 2011) the Czech university system is practically orientated when compared to other countries, the evaluator believes that in the case of project administration co-financed from structural funds the emphasis is put more on theory, and graduates must be able to absorb a large amount of information and findings in their new jobs. It is very important that graduates have the opportunity to learn information from areas which were not covered by their studies but which are important for their jobs (e.g. for a project manager it might be important to have basic knowledge of selected aspects of legal issues, such as public support).

Further professional education is more than ever seen as essential for the development of employees in the CR. Overall, further professional education can be characterised as an important part of a knowledge society, and it represents an added value to school education and enables to actively acquire knowledge on important news in the given field.

The current situation on the market with further professional education can be characterised as gradually stabilised. During the transformation process the professional education market started changing to become a buyer's market, and adult education became subject to the mechanism of supply and demand, while service providers started to focus on customer needs in a more focused manner. Many business were set up quickly and started to

provide further education despite the fact that they often had no previous experience or necessary qualifications to provide further education. This is still the situation today although there has been some improvement, however there is no central systematic approach to the issue of further education.

According to a short survey carried out by the evaluator with regard to the administration of structural funds there is **a sufficient number of educational courses** on offer that cover the most important aspects of project management and administration. These courses are usually run on a commercial basis and the competition often forces the providers of these courses to amend their pricing policies to gain customers. The evaluator points out the fact that the basis for successful project administration and management is, in particular, an **active participation in seminars organised by the MA**. **These seminars must focus on** solving practical aspects and problems that might occur during project administration.

When searching for further education providers, a comprehensive offer of all courses provided by the most important further education providers can currently be found on the Internet, although the level of detail of the information provided on the courses on offer differs for individual providers and the interested entity must acquire further information.

Commercial courses are particularly important for graduates so that they can learn skills in areas that have not been covered by the seminars mentioned above, as these skills are considered to be automatic the commercial courses are also useful for increasing skills in the areas that are not codified in the OP RD&I rules, but that are very important for the quality of project management and administration (in particular general team management skills, efficient communication etc.). In addition, the evaluator believes that further education courses are also important for members of staff dealing with the physical contents of projects, i.e. scientific workers, who can learn about selected aspects of preparing projects, and in particular implementing projects co-financed from structural funds, in particular the OP RD&I.

Although there are many courses on the market for members of staff involved with project management and administration co-financed from the OP RD&I, their quality differs according to the evaluator's experience. Considering the fact that there is no real systematic evaluation of these courses in the CR (the MLSA Quality of Further Education project only ensured the fact that the courses on offer complied with predefined minimum requirements) and therefore it can be difficult for recipients to identify good quality further education providers. The MA of the OP RD&I can only solve this problem to a limited extent, however as a partial solution the evaluator recommends to earmark the quality of professional education topic for discussion during seminars organised for recipients where the recipients could share their experience.

7.3 RECOMMENDATIONS

To secure quality implementation teams for individual projects falls within the competency of individual project executors. With regard to the recipients it is possible to recommend, in particular, participation in educational activities regarding the issues of the OP

RD&I organised by the managing authority (seminars, conferences etc.), or organised by other parties.

The managing authority can support the recipients' effort to improve the quality of expert teams within individual projects, in particular through education and sharing good practice. The following can be regarded as suitable tools:

- Organisation of **seminars, training, workshops and conferences** focused on the issue of the OP RD&I
- **Creating a platform** to share experience and good practice between the MA and project executors (see recommendations in Chapter 2.4 and others).

8. LIST OF ANNEXES, TABLES AND GRAPHS

LIST OF ANNEXES

LIST OF TABLES

LIST OF GRAPHS