



# Ongoing evaluation of implementation of the Operational Programme Research, Development and Education

Ministry of Education, Youth and  
Sports

## Progress Report 07

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EUROPEAN UNION  
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## Executive summary



Based on the state of implementation, factual progress partially corresponds with the anticipated state of implementation of OP RDE to a given date.

Between 31 December 2018 and 30 June 2019, 102 of 156 result and output indicators across priority axes to which projects are directly committed showed non-zero value.



The risk of not-fulfilling target values and the risk of over-fulfilling target values has been identified.

A risk of non-fulfilment is identified in 36 out of 156 programme indicators. The list of these indicators is given in the following table:

**Table 1 Executive summary – risk of non-fulfilment of the target values of indicators**

PA/IP	Output indicator/Result indicator	Code of the indicator	Name of the indicator
PA1	Output	21501	Number of newly created products of RDI strategic management (LDR)
PA1	Output	20000	Number of companies cooperating with research institutions (LDR and MDR)
PA1	Output	54501	Number of students using newly built, expanded or modernized infrastructures for study programmes focused on research (MDR)
PA2 IP1	Output	20803	Number of supported administrative and technical workers in R&D (MDR)
PA2 IP1	Output	54601	Number of students of study programmes focused on research and Ph.D. students who have taken part in the internship programme (LDR and MDR)
PA2 IP1	Output	52901	Number of newly established accredited study programmes in Czech (MDR)
PA2 IP1	Output	53001	Number of newly established study programmes organized in cooperation with another high education institute (MDR)
PA2 IP1	Output	53101	Number of new study programmes focused on practice (MDR)
PA2 IP1	Output	52902	Number of study programmes with at least one subject taught in a foreign language (MDR)
PA2 IP1	Output	52103	Number of supported products of LL (MDR and LDR)
PA2 IP1	Output	54301	Number of new project plans supported by Smart Accelerator (MDR)
PA2 IP1	Output	53103	Number of new bachelor study programmes focused on practice (MDR and LDR)
PA2 IP2	Output	52701	Number newly built, expanded or modernized infrastructures for scientifically oriented study programmes (MDR and LDR)
PA2 IP2	Output	54501	Number of students using newly built, expanded or modernized infrastructure in scientifically oriented study programmes (MDR and LDR)
PA2 IP1	Result	52910	Number of study programmes taught in a foreign language (LDR)



PA/IP	Output indicator/Result indicator	Code of the indicator	Name of the indicator
PA2 IP1	Result	53110	Number of graduates of first years of new study programmes focused on practice (MDR)
PA2 IP1	Result	53113	Number of graduates of first years of new Bachelor study programmes focused on practice (MDR)
PA2 IP1	Result	52114	Number of students with SN using the products of advisory and assistance support (MDR)
PA2 IP1	Result	52113	Number or newly created courses of LL (MDR)
PA2 IP1	Result	52810	Number of graduates of new or modernized study programmes focused on research accredited also for education in a foreign language (MDR and LDR)
PA2 IP1	Result	50810	Number of organizations influenced by a systemic intervention (LDR and MDR)
PA2 IP1	Result	51710	Number of Roma children, pupils and students in supported organizations (MDR)
PA3 IP2	Output	52100	Number of supported products (LDR and MDR)
PA3 IP2	Result	51010	Number of organizations where the quality of education and pro-inclusiveness increased (LDR and MDR)
PA4	Output	80500	Number of written and published analytical and strategic documents (including evaluation)
PA4	Output	82000	Number of carried-out trainings, seminars, workshops, conferences
PA4	Output	80103	Number of created communication tools

A risk of over-fulfilment is identified in 85 out of 156 programme indicators. A list of given indicators is shown in the following table:

**Table 2 Executive summary – risk of over-fulfilment of the target values of indicators**

PA/IP	Output indicator/Result indicator	Code of the indicator	Name of the indicator
PA1	Output	20400	Number of new research workers in supported subjects (LDR and MDR)
PA1	Output	20500	Number of research workers working in modernized research infrastructures (LDR and MDR)
PA1	Output	24000	Number of newly built, expanded or modernized research infrastructures and centres of excellence (LDR and MDR)
PA1	Output	52701	Number of newly built, expanded or modernized infrastructures in scientifically oriented study programmes (LDR and MDR)
PA1	Output	21501	Number of newly created products of RDI strategic management (MDR)
PA1	Output	24101	Number of expanded or modernized research centres (LDR)
PA1	Output	54501	Number of students using newly built, expanded or modernized infrastructure in scientifically oriented study programmes (LDR)
PA2 IP1	Output	60000	Total number of participants (LDR)
PA2 IP1	Output	20800	Number of supported research and academic workers (LDR and MDR)
PA2 IP1	Output	20803	Number of supported administrative and technical workers in R&D (LDR)
PA2 IP1	Output	20806	Number of supported persons involved in the RDI policy management and implementation (LDR and MDR)
PA2 IP1	Output	52100	Number of supported products (LDR and MDR)



PA/IP	Output indicator/Result indicator	Code of the indicator	Name of the indicator
PA2 IP1	Output	52901	Number of newly established accredited study programmes in Czech (LDR)
PA2 IP1	Output	52902	Number of study programmes with at least one subject taught in a foreign language (LDR)
PA2 IP1	Output	52104	Number of products of advisory and assistance support (MDR and LDR)
PA2 IP1	Output	53501	Number of products created to increase quality of strategic management and system of evaluation of high education institutes (MDR and LDR)
PA2 IP1	Output	52801	Number of new or modernized study programmes focused on research accredited also for education in a foreign language (MDR and LDR)
PA2 IP1	Output	21502	Number of products created to increase quality of strategic management and system of evaluation of high education institutes (MDR and LDR)
PA2 IP1	Output	54301	Number of new project plans supported by Smart Accelerator (LDR)
PA2 IP1	Output	54303	Number of new tools for RDI support at the regional level (MDR and LDR)
PA2 IP2	Output	30600	Acquired information sources (MDR and LDR)
PA2 IP2	Output	30500	Number of acquired information sources (LDR)
PA2 IP1	Result	53110	Number of graduates of first years of new bachelor study programmes focused on practice (LDR)
PA2 IP1	Result	53113	Number of graduates of first years of new bachelor study programmes focused on practice (LDR)
PA2 IP1	Result	52114	Number of students with SEN using products of advisory and assistance support (LDR)
PA2 IP1	Result	52113	Number of new created courses of LL (LDR)
PA2 IP1	Result	53510	Number of universities with established transparent systems of quality assessment (LDR)
PA2 IP1	Result	20810	Number of organizations whose workers' qualification in R&D, R&D management and related areas have been increased (MDR and LDR)
PA2 IP1	Result	20415	Number of research organizations with newly arrived foreign workers from abroad or a private sector (MDR and LDR)
PA2 IP1	Result	20811	Number of research organizations with a modernized system of strategic management (MDR and LDR)
PA2 IP1	Result	54310	Number of supported cooperations (MDR and LDR)
PA3 IP1	Output	60000	Total number of participants (LDR and MDR)
PA3 IP1	Output	52100	Number of supported products (LDR and MDR)
PA3 IP1	Output	50801	Number of products in systemic projects (LDR and MDR)
PA3 IP2	Output	52100	Number of supported products (LDR)
PA3 IP2	Output	50801	Number of products in systemic projects (LDR and MDR)
PA3 IP3	Output	60000	Total number of participants (LDR and MDR)
PA3 IP3	Output	52100	Number of supported products (LDR and MDR)



PA/IP	Output indicator/Result indicator	Code of the indicator	Name of the indicator
PA3 IP3	Output	50801	Number of products in systemic projects(LDR and MDR)
PA3 IP1	Result	51010	Number of organizations with increased quality of education and pro-inclusiveness (LDR and MDR)
PA3 IP1	Result	52510	Number of workers in the education system who apply newly acquired knowledge and skills in practice (LDR and MDR)
PA3 IP1	Result	50810	Number of organizations influenced by a systemic intervention (LDR and MDR)
PA3 IP1	Result	51610	Number of children and pupils with the need for supportive measures in supported organizations (LDR)
PA3 IP1	Result	51710	Number of Roma children, pupils and students in supported organizations (LDR)
PA3 IP1	Result	54310	Number of supported cooperations (LDR and MDR)
PA3 IP2	Result	52510	Number of workers in the education system who apply newly acquired knowledge and skills in practice (LDR and MDR)
PA3 IP2	Result	50810	Number of organizations influenced by a systemic intervention (LDR and MDR)
PA3 IP3	Result	50810	Number of organizations influenced by a systemic intervention (LDR and MDR)
PA3 IP3	Result	52510	Number of workers in the education system who apply newly acquired knowledge and skills in practice (LDR and MDR)
PA3 IP3	Result	51715	Number of Roma children and pupils included in the education (LDR and MDR)
PA4	Output	80600	Number of meetings of authorities, working or advisory groups
PA4	Output	80103	Number of organized information and promotion activities



The values of OP RDE milestones for 2018 were fulfilled.

The values of OP RDE milestone indicators were fulfilled in the amount that ensured fulfilment of OP RDE for individual priority axes. The OP RDE performance indicator was met.


The factual progress of the OP RDE implementation can already be demonstrated by the results of individual projects. To this end, a field survey was carried out in this report.

### Digital education and development of computational thinking

The main document covering digital education in the Czech Republic is the Digital education strategy of the Czech Republic up to 2020 (DES). Its aim is to support the development of initial digital education. The DES defines 3 main objectives (opening education to new methods and ways of learning with the use of digital technologies, improving pupils' competences in work with information and digital technologies, developing pupils' computational thinking), followed by 23 measures grouped in seven areas of intervention. These should contribute to the fulfilment of the DES's main objectives.

23 calls of the OP RDE contribute directly or indirectly to the fulfilment of the Digital education strategy. The link to the strategy is explicitly mentioned in 11 calls and these calls have the greatest influence on the fulfilment of this strategy. Within the investigations, the impact of the OP RDE projects and calls on the fulfilment of 13 DES measures was identified. In general, the calls and their projects help to fulfill DES measures through capacity building related to the development of digital literacy





and computational thinking (creation of educational materials using technologies, development of competences of teachers in connection with the use of technologies, sharing of experiences and networking of schools and teachers, etc.). Some calls make it possible for schools to acquire new equipment needed to integrate new technologies in the classroom, as well as to provide the support needed to use these technologies (e.g. ICT methodologies).


The created system of calls and projects of OP RDE directly focused on the implementation of the strategy contributes significantly to the fulfilment of the DES. This system consists of system projects (Supporting Capacity Building for Basic Literacies at Preschool and Elementary Education - Supporting Teaching Practice - PPUČ and System of Support for the Professional Development of Teachers and Headmasters - SYPO). System projects serve for coordination and methodological support of conceptual projects (projects in the ISDE I call: Support for development of computational thinking - PRIM and Support for the development of Digital literacy - PRDG). Conceptual projects are exemplary projects and provide resources for innovation in education in the field of computational thinking and digital literacy. These projects will be followed by projects in the ISDE II call, which should provide additional resources for teaching and support the education of teachers in the field of digital education also according to DigCompEd. Some calls and projects that are not directly aimed at promoting and developing digital technologies also contribute to the fulfilment of DES. These calls and projects contribute, for example, by creating educational materials using digital technology, developing the skills of teaching staff to use technology in teaching, and more.

Interviews with the implementers of the above-mentioned four projects, which have a major impact on the fulfilment of DES, were conducted within the field surveys. These projects contribute to the development of digital literacy and computational thinking by mapping the current situation and needs of schools in the field of digital literacy, the use of technology, etc. and, where appropriate, their subsequent support. The projects also partially aim at changing the perception of teachers and try to show them new teaching methods and the benefits of using technology, developing digital literacy and computational thinking. The projects contribute to the sharing of teachers' experiences and their networking. One of the projects focuses on the modification of the current form of the subject of informatics, which is currently focused on teaching related to the control of computer applications, while the new subject of informatics should focus on teaching concerning algorithmization, modeling, programming, etc. On the contrary, another project focuses on the analysis of individual fields taught at schools and the identification of space in them where ICT use and digital literacy could be developed. These projects create educational materials for schools, courses aimed at supporting existing teachers, and create new subjects and materials for students of faculties of education. The projects also contribute to the popularization of digital education.

### Environment at Higher education institutions

The OP RDE interventions at higher education institutions (HIEs) can be divided into two groups. The first part of the interventions was aimed at HIEs as beneficiaries in the form of educational institutions and the second part was used to support HIEs as research organizations. The beneficiary of OP RDE funding is 40 HIEs, which together implement 458 projects totaling more than CZK 37.2 billion (ESF and ERDF). The beneficiaries are mainly public HIEs, which implement more than 95% of these projects and almost all the funds were directed to them. The largest beneficiaries of OP RDE funds are Charles University, Czech Technical University in Prague and Masaryk University. Most projects are realised at the Czech Technical University in Prague, Charles University and Palacký University Olomouc. Higher education institutions received most of their funding from calls in which the beneficiaries are educational institutions. These are 10 calls, in which the total allocation of funds is more than CZK 26 billion, five of these calls were financed from the ESF and five from the ERDF.





ESF interventions intervened to improve the quality of education, one of the important tools was increasing qualifications and competences of academic staff. The survey carried out to evaluate the results of these interventions between academic and non-academic employees of higher education institutions shows that they usually do not have a centrally set plan of educational activities which would cover development and further education of staff. It often depends on the employees' own will to attend the courses / training. At their work at HIEs, staff most often encounter the opportunity to increase their qualifications in the field of language competencies, professional qualifications, soft-skills and pedagogical and didactic competences. These staff are generally satisfied with the results / benefits of the training courses, and satisfaction is highly dependent on the quality of the trainer. Higher education institutions staff attend courses / training mainly to improve their skills / knowledge in the current field or in their areas of interest.

Internationalization of the higher education institutions environment was another area of focus of the ESF calls. The survey carried out between academic and non-academic staff of HIEs shows that they have experience in working with foreign institutions or experts, as well as using the opportunity to work abroad. However, there are still reserves in the frequency of foreign trips and cooperation. More frequent forms are short-term cooperation (conferences, etc.), while long-term trips are problematic due to, for example, high workload of staff (teaching, other projects, family, etc.), poor language skills or lack of funds.

According to respondents of the questionnaire survey, internationalization activities such as support for international student mobility, development of strategic partnerships with foreign institutions and support for international mobility of academic, research and technical staff contribute to improving the quality of studies. According to FG participants, international cooperation at higher education institution is standard, it needs to be further supported but it cannot be said that it is the main factor for improving quality at higher education institution. Several factors are needed to ensure quality teaching and not just one. Both the academic abilities of teachers and the conditions of academics at HIEs are important for the quality of teaching (e.g. adequate infrastructure equipment, educated staff interested in further education, managers who will motivate their subordinates to further education, high school students ready to study at higher education institution, etc.).

A sample of calls was made to assess the areas of education for new / upgraded doctoral programmes and modernized programmes in structurally affected regions. It can be concluded that all areas of education except veterinary medicine were identified in the calls. Doctoral degree programmes are most often implemented in the fields of education in chemistry, engineering, technology and materials and physics. In the modernized study programmes of higher education institutions in structurally affected regions, the most frequent fields of study are artistic study programmes, engineering, technology and materials.

The ERDF calls enabled HIEs to invest in infrastructure provision for teaching, improving the learning environment, and also enabling the acquisition or creation of information resources for teaching. Both academic and non-academic staff of HIEs are generally satisfied with the state and development of infrastructure equipment of HIEs. A considerable amount of money has been invested in the development of existing HIEs infrastructure and equipment (new buildings were built, instruments and equipment purchased, etc.) and equipment is often of a high standard. In some cases, spaces for students and staff to meet and work together on projects are considered insufficient by academic and non-academic staff, and there is also lack of student rest / relaxation areas (armchairs in hallways, meeting rooms, etc.). Some academic and non-academic staff of higher education institutions have stated that it is also necessary to build new dormitories, refectories and other premises, which, however, cannot be financed from EU funds but can be financed from available national funds.





## Financial progress corresponds to the expectations stated in the OP RDE programme document

Financial progress as of the decisive date corresponds to the expectations stated in the OP RDE programming document. As of 30 June, 2019, a total of CZK 73,353 million was committed, which represents 83.9% of the total allocation of the programme (currently half of the fifth year of programme implementation, when support is expected to amount to approximately 77% of the total allocation). The share of disbursed funds in the total allocation of OP RDE is then 49% of this allocation. In PA1 and PA2 there is a relatively low share of disbursed funds in relation to committed funds. Funds allocated by calls exceed the allocation set out in the OP RDE programming document. This is caused by the fact that in some already terminated calls not all allocated funds were exhausted and consequently were reallocated in other announced calls. Therefore, these funds are counted twice. A detailed overview is given in the following table.

**Table 3 Financial fulfilment according to funds**

Priority axis	Fund	Ratio of call allocation to OP RDE allocation	Ratio of volume of committed funds to OP RDE allocation	Ratio of volume of reimbursed funds to OP RDE allocation
PA1	ERDF	125.44%	97.38%	49.81%
PA2	ERDF	137.84%	114.76%	61.62%
	ESF	108.39%	66.36%	37.86%
PA3	ESF	101.67%	63.07%	47.01%
PA4	ERDF	118.58%	69.71%	47.09%
<b>Total</b>	<b>ERDF</b>	<b>128.13%</b>	<b>100.02%</b>	<b>52.61%</b>
	<b>ESF</b>	<b>103.42%</b>	<b>63.92%</b>	<b>44.63%</b>
	<b>ERDF+ESF</b>	<b>117.08%</b>	<b>83.88%</b>	<b>49.04%</b>

Based on the financial progress analysis, the evaluator notes that the financial milestone 2018 has been met and the N+3 rule for 2019 has been met.



Based on the current status of financial progress on 30 June 2019, no risk of non-utilization of allocated resources of the OP RDE has been identified.

All specific objectives of OP RDE are covered by at least one announced or closed call or by at least one call in the Schedule of Calls. The absorption capacity of the calls was in the case of all the calls completed in the period from 31 December 2018 to 30 June 2019 estimated correctly. The analysis showed that mostly middle-quality and high-quality project applications were supported (based on the number of points).



Factors which could affect effective implementation of OP RDE were identified.





The identified factors that currently have a negative effect on the progress of implementation of the programme are mentioned in the table below. The factors are divided into serious (red), moderate (orange) and minor (green).

**Table 4 Factors influencing the state of implementation of the programme**

Factor	Description	Impact	Probability of occurrence	Factor severity
<b>PA1 – A risk of non-fulfilment of the output indicators</b>	<p>In the following output indicators, a risk of non-fulfilment of target values has been identified:</p> <p>21501 - Number of newly created products of RDI strategic management (LDR)</p> <p>20000 - Number of companies cooperating with research institutions (LDR and MDR)</p> <p>54501 - Number of expanded or modernized research centres (MDR)</p>	2	2	4
<b>PA2 – A risk of non-fulfilment of the output indicators</b>	<p>In the following output indicators, a high risk of non-fulfilment of target values has been identified:</p> <ul style="list-style-type: none"> <li>• IP1: Number of supported administrative and technical workers in R&amp;D (MDR)</li> <li>• IP1: Number of students of study programmes focused on research and Ph.D. students who have taken part in the internship programme (MDR and LDR)</li> <li>• IP1: Number of newly established accredited study programmes in Czech (MDR)</li> <li>• IP1: Number of newly created study programmes taught in cooperation with another university (MDR)</li> <li>• IP1: Number of new study programmes focused on practice (MDR)</li> <li>• IP1: Number of study programmes with at least one subject taught in a foreign language (MDR)</li> <li>• IP1: Number of supported products of LL (MDR and LDR)</li> <li>• IP1: Number of new project plans supported by Smart Accelerator (MDR)</li> <li>• IP1: Number of new bachelor study programmes focused on practice (MDR and LDR)</li> <li>• IP2: Number newly built, expanded or modernized infrastructures for scientifically oriented study programmes (MDR and LDR)</li> <li>• IP2: Number of students using newly built, expanded or modernized infrastructure in scientifically oriented study programmes (MDR and LDR)</li> </ul>	3	2	6
<b>PA2 – A risk of non-fulfilment of the result indicators</b>	<p>There is a risk of non-fulfilment of the following result indicators:</p> <ul style="list-style-type: none"> <li>• IP1: Number of study programmes taught in a foreign language (LDR)</li> <li>• IP1: Number of graduates of first years of new study programmes focused on practice (MDR)</li> <li>• IP1: Number of graduates of first years of new Bachelor study programmes focused on practice (MDR)</li> </ul>	3	2	6





Factor	Description	Impact	Probability of occurrence	Factor severity
	<ul style="list-style-type: none"> <li>IP1: Number of students with SN using the products of advisory and assistance support (MDR)</li> <li>IP1: Number of newly created courses of LL (MDR)</li> <li>IP1: Number of graduates of new or modernized study programmes focused on research accredited also for education in a foreign language(MDR and LDR)</li> <li>IP1: Number of organizations influenced by a systemic intervention (MDR and LDR)</li> <li>IP1: Number of Roma children, pupils and students in supported organizations (MDR)</li> </ul>			
<b>PA3 – A risk of non-fulfilment of the output indicators</b>	There is a risk of non-fulfilment of the output indicator IP2 Number of supported products (MDR)	2	2	4
<b>PA3 – A risk of non-fulfilment of the result indicators</b>	There is a risk of non-fulfilment of the result indicator IP2 Number of organizations where the quality of education and pro-inclusiveness increased (MDR and LDR)	2	2	4
<b>PA4 – A risk of non-fulfilment of the output indicators</b>	There is a risk of non-fulfilment of the following result indicators: <ul style="list-style-type: none"> <li>Number of written and published analytical and strategic documents (including evaluation papers)</li> <li>Number of organized trainings, seminars, workshops and conferences</li> <li>Number of created communication tools</li> </ul>	2	2	4

Based on analysis, the following recommendation was created.

**Table 5 Recommendations resulting from the findings**

Recommendation	Description of recommendation	Prioritization of recommendation	Implementation steps
<b>Revision of the Operational Programme of the settings of the values of the indicators in PA1 – PA4</b>	For all priority axes, indicators were identified that revealed the risk of both the non-fulfilment of target values of the indicators and their over-fulfilment, even in the order of hundreds of percent. For this reason, it is recommended to revise the OP in order to adjust the target values of selected indicators.	4	<ol style="list-style-type: none"> <li>Finalize the document containing the arguments behind suggestions for changes in indicator values.</li> <li>Start a formal negotiation process with the European Commission</li> </ol>

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