



Improving the system of indicators used in monitoring and evaluation

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Ministry of Public Finance
Authority for Coordination of Structural Instruments (ACIS)

Improving the system of indicators used in monitoring and evaluation

Activity 1.1 Analysis of the system of indicators used in monitoring and evaluation

SOP Increase of Economic Competitiveness

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OPERATIONAL PROGRAMME IECIRONMENT

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1. NEEDS ASSESSMENT

The “Needs assessment questionnaire” was distributed to SOP IEC stakeholders and was completed by ten representatives from the Managing Authority and the Intermediate Bodies. Their answers provide details regarding the latest developments as well as concrete appraisals in respect to the system and the individual indicators of used for monitoring and evaluation of SOP IEC.

As presented in the Methodology chapter, stakeholder views are deliberately reported as received. The chapter does not comment on their accuracy, validity or feasibility. However, it does provide (in text boxes) a number of preliminary conclusions based on the views of the stakeholders.

Findings are presented in two sub-sections: (1) general design of the indicators system of SOP IEC, which includes observations for individual indicators and (2) institutional set-up, including references to resources, SMIS usage and communication.

Together with the outcomes of the analysis exercise, presented in the next chapters, the stakeholders’ views provided the foundations for the conclusions and recommendations for improving the system of indicators of SOP IEC.

1.1. GENERAL DESIGN OF THE INDICATORS SYSTEM

In respect to the general design of the SOP IEC indicators system, the survey shows that most respondents consider that it answers their needs in an appropriate way. In terms of coverage, most respondents note that no additional indicators are necessary for SOP IEC and none of the existing indicators are redundant (see answers to Q2.2. and Q2.3.). One respondent suggests that additional “relevant” indicators be introduced for TA, whereas all the others agree that none of the indicators should be moved or modified. No specific suggestions were made in this respect in the dedicated sections of the questionnaire but several other references for modifications exist throughout the text, in other sections. For example, the indicator *Number of new jobs created* should be applied only to SMEs and large companies, since it is not relevant for public institutions. Also, the TA indicator *Number of training days* should be split between beneficiaries/potential beneficiaries and implementing structures (MA and IBs). Other suggestions concern:

- The disaggregation by gender and enterprise size of some indicators, namely:
 - *Number of projects for supporting direct investments in SMEs* – by micro/ small/ medium enterprise
 - *Number of jobs created – direct investments* in SMEs, by men/women
- The standardisation of TA indicators so that they are the same for all TA axes, across OPs;
- Introducing core indicators of qualitative nature, at EU level.

Opinions are divided in respect to balance: some respondents consider that the SOP-IEC indicator system is well balanced and this issue has been addressed from the programming period, through the development of the Framework Document of Implementation; other respondents believe that it needs improvement, as output and result indicators are difficult to follow into program level indicators. Again, TA indicators are given as an example (see answers to Q2.5).

Most respondents agree that the current indicators system ensures a good correlation between the different levels of monitoring – project/ operation/ programme/ NSRF – and

that “each of the established indicators has its relevance and specific contribution to ensuring a proper connection at the level of the indicators system” (see answers to Q2.6). Those who answered negatively did not offer any further details. At the same time, one respondent noted that indicators are not correlated with the objectives (see answers to Q4.5).

All respondents agreed that EU guidelines are integrated and that there are no difficulties in this respect, as the indicators were agreed and integrated into the SOP IEC together with the EC. Also, there were generally no difficulties reported in integrating EU core indicators. Only one respondent mentioned the “chronic lack of information and training” as a difficulty in this respect (see answers to Q2.10).

In respect to the existence of any direct agreements between the MA and the EC, answers differ significantly, which can suggest that either the question was not fully understood by the respondents or that the degree of awareness is low (see answers to Q2.8).

Preliminary conclusions

- a) *In the light of the analysis made in the course of this project and of the findings presented in the next chapters (see Sections 4.2. and 5.2.2), the opinions stated above are generally valid and show an overall good understanding of the functioning and purpose of the system of indicators. The few notable exceptions to this, namely the existence of agreements between the MA and EC or the contracting answers to some of the questions stem, most likely, from the different levels of involvement in the tasks related to indicators and show the scope for improvement regarding the nature of the system of indicators. As shown in the next chapters, it is advisable to have a common approach across OPs in respect to TA indicators, as well as overall clear guidelines, which were also suggested by the SOP IEC representatives.*
- b) *As regards suggestions on specific indicators, most have been included in the next chapters. However, others deserve more consideration: for example, although the recent developments in the socio-economic environment have demonstrated that “new jobs created” is more suitable for the private sector, one cannot disregard it completely for the public sector, but rather remove it as a selection criteria at project level and, for the future, keep it as an obligation only for monitoring purposes.*

1.2. INSTITUTIONAL SET-UP

In terms of management, ACIS is seen as the national authority that should be coordinating the work with indicators and providing uniform guidelines across OPs.

Currently, at the level of the MA or IBs, there are no specific procedures dedicated to working with indicators, partially because they were not necessary up to now. However, there is seen to be clear monitoring and evaluation procedures, as well as a well coordinated and functioning system, which includes SMIS and the Monitoring Service.

In respect to the different functions and procedures, most respondents considered them fairly difficult and hard to accomplish, while only a few scored them as easy and understandable (see answers to Q3.2).

The most important institutional needs and deficiencies affecting the work with indicators are related to:

- Insufficient personnel and excessive workload;
- Lack of training and information;
- Lack of resources (stationary, infrastructure) and poor working conditions;

- Poor working conditions;
- Lack of dedicated procedures;
- Insufficient development of SMIS - the system should allow access for beneficiaries and should enable the input of project and KAI level indicators;
- Lack of correlation between initial TA result indicators and others which have been added afterwards.

Communication among the different parts of the system was considered acceptable by all respondents (see answers to Q3.4). As regards the main deficiencies affecting inter-institutional communication, these relate to bureaucracy, complicated internal procedures, insufficient coordination between institution, which translates into overlapping requests, lack of experience, delays in transmitting information to lower levels of decision, absence of direct communication and exclusive reliance on written communication (see answers to Q3.5).

In terms of intra-institutional communication, most problems relate to excessive workload, lack of clear, dedicated procedures, lack of experience and “lack of communication” (see answers to Q3.6).

As already stated, SMIS is considered underdeveloped for the current requirements. Main problems relate to the insufficient customisation of the needs of SOP IEC and general difficulty of use, particularly in respect to project monitoring. Another aspect which was brought to our attention was the restrictive access into the system, which hampers efficiency – on the one hand, beneficiaries do not have access into the system and on the other hand, ACSI has exclusive rights in defining parameters. Suggestions for SMIS improvement (see answers to Q3.5) are related to the problems identified above and refer mainly to simplification and customisation to SOP IEC specific requirements. Most comments are directed to working with project level indicators. Also, taking into consideration the fact that, at present, only programme level indicators are introduced into SMIS, it would be useful to have a new method of aggregation, namely by separating monitoring and reporting of project indicators from programme indicators (see answers to Q3.8).

All respondents agreed that there are not enough resources (human, financial) for working with indicators. The most important problem in this respect is the lack of personnel and excessive workload, insufficient logistics and office supplies. Also, the persons working with indicators did not receive appropriate instructions in this respect. Thus, the most important needs refer to specialised training (customised by level of decision-making and particularly on how to use indicators and aggregation for monitoring progress at project/ KAI/ programme level) and adequate procedures, possibly developed by ACSI in a coherent approach across OPs.

Opinions were expressed that SMIS is not sufficiently developed so as to meet the needs of inputting indicators at project level, is not customised for SOP IEC and is difficult to use, both for uploading data and for generating reports.

As regards the current distribution of responsibilities, responses vary. While most suggestions for increasing efficiency and effectiveness refer to training, elaborating dedicated procedures, improving SMIS and even rethinking the entire system of indicators.

The most important changes suggested by the respondents refer to:

- Simplifying the indicators system;
- Elaborating special procedures, adapted to each PA;
- Simplifying work procedures and intra-institutional relations;
- Providing adequate working and storage space;
- Introducing qualitative indicators;
- Redefining SMIS – simplifying the system and types of indicators used in SMIS;

- De-bureaucratisation;
- Elaborating a methodology for analyzing and aggregating indicators;
- Training;
- Modifying the system of indicators so as to reflect “reality”;
- Modifying indicators so as to make them consistent for all TA axes;
- Improving communication;
- Collecting project level indicators electronically and granting access into the system for beneficiaries for inputting data.

In respect to communicating to the general public, the most important channels used by the MA/IBs are communication and information events and newsletters. These contain information regarding financial progress, number of projects etc. No problems were identified in communicating and all the information collected at MA/IB level is available to communication officers. Out of the list of indicators, all were considered by respondents as interesting to the general public.¹

Preliminary conclusions

- a) Most needs expressed in relation to the institutional set-up have been confirmed by other sources²: simpler procedures, clear instructions (methodologies), training and proper logistics are essential for the functioning of the system. However, as stated before, it is recommended to have a common approach on indicators, instead of elaborating special procedures for each PA; instead, it is advisable to have a tailored approach in selecting relevant indicators and providing the proper means for monitoring them, for each operation. This means not only a fully functional, improved electronic system (SMIS) but also enabling access for beneficiaries.*
- b) While the indicators system must be accompanied by qualitative information to allow proper interpretation of progress, it is not advisable to “modify the system of indicators so as to reflect reality”. Rather, there is a clear need for redefining indicators treatment at project level, so as to facilitate monitoring.*

¹ Each IB mentioned all indicators pertaining to its respective PA.

² For example the NSRF Interim Evaluation Report 2009



2. ANALYSIS OF THE INDICATORS SYSTEM

2.1. COVERAGE OF THE INDICATORS SYSTEM

2.1.1. SOCIO-ECONOMIC ENVIRONMENT

When proposing context indicators for the SOP IEC, the following issues were considered:

- 1) Potential context indicators resulting from the analysis of the SOP IEC were determined through:
 - a) Screening the “Analysis of the current situation” chapter, which provided information on the most important sectoral context indicators, history and perspectives;
 - b) Screening of the SWOT analysis; all four sub-section (strengths, opportunities, weaknesses and threats) offer a clear picture of the issues that have to be maximised or, on the contrary, alleviated, as well as of the ones that have to be taken into account or risk prevented;
 - c) Analysing result indicators which may have been wrongfully assigned.
- 2) Context indicators revealed by the international benchmarking analysis to be relevant for the Romanian SOP IEC/strategic objectives were taken into account.
- 3) The objectives set-up by the different strategic papers³ were analysed, as they reflect global interventions on economic competitiveness at national level; SOP IEC is one of the programmes that leads to the achievement of targets (strategic objectives) established in the national strategies; these targets should also be reflected by relevant context indicators within the SOP IEC and measured as such.

The chapters of the SOP IEC “Analysis of the current situation” and “SWOT Analysis” provide a comprehensive outline of competitiveness in Romania. When reviewing the first chapters of SOP IEC (socio-economic analysis and SWOT analysis), several potential specific context indicators were identified.

Although not defined as such, context indicators were used in the programming phase in order to identify and quantify the needs in the field. The main purpose of context indicators was to provide information on the socio-economic situation relative to competitiveness.

In the absence of formally assigned context indicators, a number of competitiveness - related OPs from other EU Member States were analysed⁴, to check for international good practice. The international benchmark analysis revealed that context indicators were defined in the Competitiveness operational programmes for Bulgaria, Czech Republic, and Slovakia⁵. As a result, the identified indicators used by other MS were mapped against the five main themes (fields) targeted by the SOP IEC in Romania, in a comparative table presented in the following pages.

³ Context indicators were analysed against the main strategic documents governing the economic competitiveness: Government Strategy for Business Environment Improvement and Development 2010 – 2014, Government Strategy for SME’ Sector Development, Romanian Energy Strategy 2007 – 2020

⁴ OPs in full text were consulted for the following MS: Bulgaria, Czech Republic, Greece, Luxemburg, Malta, Poland, Portugal, Slovakia (2007-2013);

⁵ A more detailed presentation of each OP consulted is found in the Annexes.



TABLE 1 INTERNATIONAL BENCHMARK OF CONTEXT INDICATORS FOR SOP IEC

Fields targeted by the SOP IEC	Potential context indicators resulting from the SOP IEC analysis	Context indicators targeted by the SOP "Development of Competitiveness of the Bulgarian Economy"	Context indicators targeted by the OP "Enterprise and Innovation" - Czech Republic	Context indicators targeted by the OP "Competitiveness and Economic Growth" - Slovakia
<i>Manufacturing sector covers issues like evolution of industrial production, external trade balance, foreign investments, value-added, productivity</i>	<ul style="list-style-type: none"> - Weight of industry in GDP structure - Industrial production - Manufacturing industry exports - Manufacturing industry imports - Foreign investment in manufacturing industry - Gross value-added in industry - Labour productivity in industry 	Total investments as % of GDP		Total investment in venture capital High-tech product export
<i>SME sector covers issues like SME demographics, territorial distribution, employees, turnover, export and investment, access to finance, business infrastructure and support services</i>	<ul style="list-style-type: none"> - No. of SME by size, sector and region - No. of SME in total enterprises - Number of SME employees in total economy - Average number of employees/SME - Turnover/SME - SMEs' turnover weight in economy - % export in SME turnover - Regional economic structure by sector - SME export weight in total volume of Romanian exports - SME exports in manufacturing sector - The micro-finance market portfolio - Total value of guarantees granted to SMEs in the total value of guarantees granted - No. of operational industrial parks, business incubators - No. of SMEs in industrial parks/business incubators - Business advisory services by type 			SME implementing own innovations (% of total)



Fields targeted by the SOP IEC	Potential context indicators resulting from the SOP IEC analysis	Context indicators targeted by the SOP "Development of Competitiveness of the Bulgarian Economy"	Context indicators targeted by the OP "Enterprise and Innovation" - Czech Republic	Context indicators targeted by the OP "Competitiveness and Economic Growth" - Slovakia
<p><i>Scientific research, technological development and innovation covers issues like public and private R&D, personnel, patents, innovative enterprises, partnerships between the R&D sector and productive sector, R&D infrastructure, TT&I infrastructure</i></p>	<ul style="list-style-type: none"> - Summary innovation index - Weight of R&D in GDP - Weight of R&D employees in total no. of employees - No. of patents requests - No. of patents applications per million inhabitants - Weight of companies undertaking innovative activities - Innovative companies in industry - Innovative companies in services - Innovative companies by size - R&D activities performed by businesses (%) - No. of excellence centres - No. of organisations specialised in the dissemination, transfer and valorisation of R&D results in economy 	<p>Expenditures on R&D as % of GDP</p>	<p>Patent applications registered with European Patent Office Overall Innovativeness index Employment in knowledge services</p>	<p>Summary innovation index (SII)</p>
<p><i>Information and Communications Technology (ICT) covers issues like sector development, access to information and communications technologies, ICT services and applications, e-</i></p>	<ul style="list-style-type: none"> - ICT contribution to GDP - Telecom market structure - % of broadband connections of total internet access connections - Broadband penetration rate - % of enterprises with broadband connections - Ration of the broadband services coverage for the urban/suburban comparison and for the urban/rural comparison - Local public institutions having access to 			



Fields targeted by the SOP IEC	Potential context indicators resulting from the SOP IEC analysis	Context indicators targeted by the SOP "Development of Competitiveness of the Bulgarian Economy"	Context indicators targeted by the OP "Enterprise and Innovation" - Czech Republic	Context indicators targeted by the OP "Competitiveness and Economic Growth" - Slovakia
<i>government, e-learning, e-health, e-business, regional disparities</i>	broadband connection - E-government applications accessed by population - Internet penetration rate in educational sector - ICT penetration in the health sector - % of enterprises having internet access			
Energy sector and energy efficiency covers issues like energy production and consumption, energy efficiency, environmental impact of the energy system, renewable, gas and electricity interconnections	<ul style="list-style-type: none"> - Electricity production - Gross consumption of natural gas - Energy efficiency - Energy intensity (total, primary energy, final energy) - Electricity consumption - Average technological consumption (including commercial losses) in distribution grids - Usage of oil transportation capacity - Final energy consumption in industry/GDP - The share of electricity produced from renewable energy sources in the total electricity consumption, by types of energy sources 	Energy intensity of economy (kgoe per 1000 EUR)	Energy performance of the economy	Economy's energy intensity Percentage of RES in gross electric energy consumption

Preliminary Conclusions:

- The monitoring system of the SOP IEC in Romania does not formally include any context indicators, which hinders the proper contextualisation of the programme interventions;
- The absence of context indicators does not enable the monitoring of a constantly evolving general context of the programme and limits the possibility for a continuous check on the relevance of identified needs and on the implementation of interventions financed from the OP;
- Strategic reporting at programme level (annual implementation reports) is missing an important source of useful information.

Therefore, it would be advisable to consider the formal inclusion in the monitoring system of a number of context indicators linked to the identified thematic fields addressed by the programme.

The following table encompasses the context indicators that were considered relevant, and their relation with the objectives within SOP IEC, but also their connection with the above-mentioned strategic documents.

TABLE 2 RECOMMENDATIONS REGARDING POSSIBLE CONTEXT INDICATORS FOR SOP IEC

Context indicators suggested for the SOP IEC Romania	Rationale
Total investments as % of GDP	<ul style="list-style-type: none"> - Relevant for the specific objective of PA1, KAI 1.1 <i>“Productive and environment friendly investments and preparation for market competition, especially of SMEs”</i>; - Linked to weakness in SWOT analysis related to the <i>low productive investment rate</i>; - Relevant for the Specific Objective 1, <i>“Promotion of economic growth through investments and improvement of the investment climate”</i>, of the Government Strategy for Business Environment Improvement and Development 2010 – 2014 - Reported by the National Institute of Statistics (NIS)
SME developing innovation activities (% of total)	<ul style="list-style-type: none"> - Relevant for the specific objective of PA2, KAI 2.3 <i>“RDI support for enterprises”</i>, operation <i>“Promoting innovation in enterprises”</i>; - Relevant for the Priority 2 <i>“Encouraging the innovative spirit of SMEs and increasing their competitiveness”</i> of the Government Strategy for SME’ Sector Development 2009 – 2013 - Reported by NIS
Summary innovation index (SII)	<ul style="list-style-type: none"> - Relevant for the specific objective of PA 2 <i>“Increase of R&D capacity, stimulation of cooperation between RDI institutions and enterprises and increase of enterprises’ access to RDI”</i> - Linked to weakness in SWOT analysis related to the <i>insufficient development of the knowledge economy</i>; - Reported by NIS
Energy intensity of economy (kgoe per 1000 EUR)	<ul style="list-style-type: none"> - Relevant for the objectives of PA 4, <i>“Increasing energy efficiency and security of supply, in the context of combating climate change”</i>; - Relevant for the sustainable development objectives of the Romanian Energy Strategy for 2007 - 2020; matching the macroeconomic indicators of the strategy; - Reported by the National Energy Data Services
Percentage of RES in gross electric energy consumption	<ul style="list-style-type: none"> - Relevant for the objectives of PA 4, <i>“Increasing energy efficiency and security of supply, in the context of combating climate change”</i>; - Relevant for the sustainable development objectives of the Romanian Energy Strategy for 2007 - 2020; - Potentially reported by the National Authority for Regulation in the Field of Energy

2.1.2. OBJECTIVES COVERED

In order to see the consistency of the indicators at system level, the correlation between indicators and objectives at different levels was analysed. The purpose was to identify:

- 1) Indicators that remain “outside” objectives;
- 2) Indicators that were inappropriately assigned to a certain PA/KAI/Operation;
- 3) Objectives that cannot be measured for lack of indicators;
- 4) Indicators that overlap

The analysis consisted in outlining the objectives of SOP IEC as well as the breakdown from global, to specific and operational objectives (at PA/KAI level).

According to the objectives tree of SOP IEC, the general objective of the OP is “the increase of Romanian companies’ productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU”.

This is further broken down into five specific objectives, as presented in the following table. For each KAI, the specific indicative operations were also examined (as detailed in SOP IEC Framework Document of Implementation, version January 2011). Another purpose of the table was to map the link between the objectives and output and result indicators, so as to provide answer to the four topics of analysis set out in the beginning of this subsection.

TABLE 3 IMPACT INDICATORS

Impact indicators	Correspondence with SOP IEC objectives	Correspondence with PA level objectives
Average annual growth of GDP per employee	SOP IEC global objective	<i>Not applicable</i>
Productivity increase (average)	SOP IEC global objective	<i>Not applicable</i>
Increase of SME share of GDP	SOP IEC specific objectives 1 and 2	Objectives of Priority Axis 1
Increase of gross domestic R&D expenditures (GERD) share of GDP	SOP IEC specific objective 3	Objectives of Priority Axis 2
Broadband penetration rate	SOP IEC specific objective 4	Objectives of Priority Axis 3
Primary energy intensity	SOP IEC specific objective 5	Objectives of Priority Axis 4
Electricity produced from renewable energy resources	SOP IEC specific objective 5	Objectives of Priority Axis 4



TABLE 4 - ANALYSIS OF OBJECTIVES COVERED FOR SOP IEC

Global objectives	Specific objectives	Priority Axis 1 - An innovative and eco-efficient productive system	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 1.1 Productive and environment friendly investments and preparation for market competition, especially of SMEs</p> <ul style="list-style-type: none"> a) Support of investments in technology, equipment, machineries, outfits, production premises; b) Support for intangible investments: acquisition of patents, trademarks, licences and know-how. c) Support for implementation and certification of quality management systems d) Support for implementation and certification of environment management systems (or EMAS registration), e) Support for voluntary certification and eco-labelling of products and services, f) Support for developing and accreditation of calibration and testing laboratories. g) Consulting services to SMEs for management systems improvement (logistic services for promoting products and services and identification of external suppliers and clients, websites, access to business networks) h) Support for participation in international fairs and exhibitions and economic missions. 	<ul style="list-style-type: none"> 1) (P) New jobs created - SMEs investments in the productive sector: <ul style="list-style-type: none"> -women - men (number) 2) (P) Certified SMEs - standards implementation (number) 	<ul style="list-style-type: none"> 1) (P) Projects supporting direct investment to SMEs (number) 2) (P) Assisted SMEs - standards implementation (number) 3) (P) Assisted SMEs - access to new markets (number) 4) (P) Large enterprises assisted (number) 5) (S) Weight of SMEs assisted in total number of eligible SMEs (%) 6) (S) Turnover increase in assisted SMEs (2 years after the project implementation)



Global objectives	Specific objectives	Priority Axis 1 - An innovative and eco-efficient productive system.	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 1.2 Access to finance for SMEs</p> <ul style="list-style-type: none"> a) Selection of financial institutions (financial intermediaries); b) Develop and update the plan and investment strategy; c) Implementation of the investment plan and strategy, including the launch and operations of their portfolio management; d) Preparation and launch calls for proposals, including selection procedures that will implement the operations of financial intermediaries; e) Negotiate agreements with financial intermediaries operating; f) Advice for financial intermediaries on financial engineering instruments selected, and their operation; g) Monitoring and reporting results to the PM; h) Attract other funding JEREMIE Holding Fund; i) Auditing and internal control; j) Establish and operate an office in Bucharest EIF. 	<p>- <i>No result indicators</i></p>	<ul style="list-style-type: none"> 1) (P) SMEs assisted through guarantee operations – financial instruments 2) (P) SMEs assisted through risk capital funds – financial instruments (number) 3) (P) Guarantee funds and risk capital funds developed – financial instruments



Global objectives	Specific objectives	Priority Axis 1 - An innovative and eco-efficient productive system.	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 1.3 Sustainable entrepreneurship development</p> <ul style="list-style-type: none"> a) Developing strategies for innovative solutions and creating new products and / or services and technologies; b) Developing business plans, feasibility studies and / or feasibility to implement eco-efficient technologies and competitive and to create competitive products; c) Preparation of studies and management strategies, marketing and / or financial analyses to implement a particular project; d) Strategies for media and promotion plans for a project; e) Strategies and development plans and human resources to foster business expansion or implementation of a particular project; f) Development of studies on intellectual property protection; g) Comparative studies for the use of tools and solutions or for a specified area; h) Develop evaluation and diagnostic studies for business transfer. 	<ul style="list-style-type: none"> 1) (S) Beneficiary's own contribution (lei) 	<ul style="list-style-type: none"> 1) (P) New business support structures created (number) 2) (P) Business support structures developed (number) 3) (P) Assisted SMEs – purchase of consulting services (number) 4) (S) Number of studies, analyses, reports, strategies



Global objectives	Specific objectives	Priority Axis 2 - Research, Technological Development and Innovation for Competitiveness	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 2.1 R&D partnerships between universities/research institutes, and enterprises for generating results directly applicable in the economy</p> <ul style="list-style-type: none"> a) industrial research; b) experimental development activities; c) protection of industrial property rights 	<ul style="list-style-type: none"> 1) (P) Jobs created / maintained at the assisted beneficiaries (number) 2) (P) Private expenditure in assisted RDI projects (Meuro) 3) (P) Public expenditure in assisted RDI projects (Meuro) 4) (P) Patent applications resulted from R&D partnership projects, high scientific level R&D projects (number) 	<ul style="list-style-type: none"> 1) (P) Projects developed jointly by R&D institutions and enterprises (number) 2) (P) R&D projects (number) 3) (P) Assisted SMEs in R&D partnership projects, high scientific level R&D projects (number) 4) (P) Large enterprises assisted in R&D partnership projects, high scientific level R&D projects (number) 5) (S) Number of specialists from abroad employed 6) (S) Number of articles in scientific publications



Global objectives	Specific objectives	Priority Axis 2 - Research, Technological Development and Innovation for Competitiveness	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 2.2 - Investments in RDI infrastructure and related administrative capacity</p> <ul style="list-style-type: none"> a) R & D infrastructure development and creating new infrastructures (laboratories, research centres) b) Develop centres of excellence c) The development of networks of R & D centres, nationally coordinated and linked with European and international networks (GRID, GEANT) d) Strengthening administrative capacity 	<ul style="list-style-type: none"> 1) (P) New jobs created (men, women) (number) 2) (P) Public expenditure in assisted R&D projects (Meuro) 3) (P) Private expenditure in assisted R&D projects (Meuro) 	<ul style="list-style-type: none"> 1) (P) R&D projects (number) 2) (P) R&D centres connected to GRID structures (number) 3) (P) Innovative structures developed - excellence poles (number) 4) (P) Institutions assisted for increasing administrative capacity (number)
		<p>KAI 2.3 RDI support for enterprises</p> <ul style="list-style-type: none"> a) Support for start-ups and innovative spin-offs b) Development of the CD business, creation of new jobs for CD c) Promoting innovation in enterprises 	<ul style="list-style-type: none"> 1) (P) New jobs created <ul style="list-style-type: none"> - men - women (number) 2) (P) Private expenditure in assisted R&D projects (Meuro) 3) (P) Public expenditure in assisted R&D projects (Meuro) 4) (P) Patent applications resulted from: <ul style="list-style-type: none"> - technological innovation projects - young innovative enterprises projects (number) 	<ul style="list-style-type: none"> 1) (P) R&D projects (number) 2) (P) Assisted SMEs in R&D projects <ul style="list-style-type: none"> - private R&D infrastructure - technological innovation - young innovative enterprises (number) 3) (P) Large enterprises assisted in R&D projects <ul style="list-style-type: none"> -private R&D infrastructure - technological innovation (number) 4) (P) Number of start-ups developed (number) 5) (P) Number of spin-offs developed (number)



Global objectives	Specific objectives	Priority Axis 3 – ICT for private and public sectors	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI i. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) iv. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 3.1 Supporting the ICT use</p> <ul style="list-style-type: none"> a) Support for Internet access and related services; b) Support for local authorities to carry out broadband networks and public access points broadband Internet (PAPI) in market failure areas (rural and small urban areas in terms of access). c) Support for SMEs to achieve broadband networks and public access points broadband Internet (PAPI) in market failure areas (rural and small urban areas in terms of access); d) Supporting schools connected to broadband internet connections. 	<ul style="list-style-type: none"> 1) (P) SMEs having access to the Internet via broadband connections - electronic communication infrastructure (number) 2) (P) Public institutions having access to the Internet via broadband connections – electronic communication infrastructure (number) 3) (P) NGOs having access to the Internet via broadband connections – electronic communication infrastructure (number) 4) (P) School units/inspectors having access to the Internet via broadband connections – electronic communication infrastructure (number) 5) (P) Additional population that will have access to broadband networks – electronic communication infrastructure (number) 	<ul style="list-style-type: none"> 1) (P) Number of ICT projects – electronic communication infrastructure 2) (P) Broadband networks built - electronic communication infrastructure (number)
		<p>KAI 3.2 Developing and increasing the efficiency of public electronic services</p> <ul style="list-style-type: none"> a) Supporting the implementation of e-government solutions and connecting to broadband, where necessary; b) Implementation of ICT system in order to increase interoperability of IT systems; c) Supporting the implementation of E-Education applications; d) Supporting the implementation of e-health solutions and connecting to broadband, where necessary; 	<ul style="list-style-type: none"> 1) (P) Registered users of e-government electronic means (number) 2) (P) Registered users of e-learning electronic means (number) 3) (P) Registered users of e-health electronic means (number) 4) (P) Registered users of inter-operability electronic means (number) 	<ul style="list-style-type: none"> 1) (P) Number of ICT projects <ul style="list-style-type: none"> - e-government - e-learning - e-health - inter-operability 2) (P) Systems for which interoperability is ensured (number) 3) (S) Number of e-government projects financed 4) (S) Number of inter-operability projects financed 5) (S) Number of e-learning projects financed 6) (S) Number of e-health projects financed



Global objectives	Specific objectives	Priority Axis 3 – ICT for private and public sectors	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> v. Consolidation and environment-friendly development of the Romanian productive sector vi. Establishment of a favourable environment for sustainable enterprises' development vii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI ii. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) viii. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 3.3 Sustaining the e-Economy</p> <ul style="list-style-type: none"> a) Support for integrated ICT systems and other electronic applications for business b) Support for the development of electronic commerce and other online business solutions 	<ul style="list-style-type: none"> 1) (P) SMEs using integrated management informatics systems (number) 2) (P) SMEs using electronic commerce informatics systems (number) 	<ul style="list-style-type: none"> 1) (P) Number of ICT projects <ul style="list-style-type: none"> - electronic solutions for businesses - electronic applications for business management 2) (P) IT systems implemented/extended – electronic solutions for businesses (number) 3) (P) IT systems implemented/extended – electronic applications for business management



Global objectives	Specific objectives	Priority Axis 4 – Increasing energy efficiency and security of supply, in the context of combating climate change	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 4.1 Efficient and sustainable energy (improving energy efficiency and environmental sustainability of the energy system)</p> <ul style="list-style-type: none"> a) Support investment in plant and equipment for companies in industry, leading to energy savings, to improve energy efficiency; b) Supporting investments in expanding and upgrading electricity transmission networks, gas and oil, as well as distribution networks for electricity and natural gas in order to reduce network losses and to achieve safe and continuity and transport services distribution (the transport: transport sub-operation - b.1. and the distribution: sub-distribution operation b.2.) c) Investment in plant flue gas desulphurisation, low NOx burners and combustion filters for large groups of upgraded / refurbished. 	<ul style="list-style-type: none"> 1) (P) Reduction of electric power absorbed from the system (MW) 2) (P) Reduction of natural gas quantity absorbed from the network (MWh) 3) (P) Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh) 4) (P) Reduction of technological losses in the distribution network (%) <ul style="list-style-type: none"> - electric energy sector - natural gas sector 5) (P) Increase of the retention capacity of SO2 emissions – Large combustion plants (t_{SO2}) 6) (P) Increase of the retention capacity of NOx emissions – Large combustion plants (t_{NOx}) 7) (P) Increase of the retention capacity of dust – Large combustion plants (t_{dust}/KWh) 8) (P) New jobs created: <ul style="list-style-type: none"> - women - men 	<ul style="list-style-type: none"> 1) (P) Projects for improving energy efficiency (number) 2) (P) Length of transportation network extended / modernised – electric energy sector (km) 3) (P) Length of transportation network extended / modernised – natural gas sector (km) 4) (P) Length of transportation network extended / modernised – oil sector (km) 5) (P) Length of distribution network extended / modernised – electric energy sector (km) 6) (P) Length of distribution network extended / modernised – natural gas sector (km) 7) (P) Projects for improving air quality – LCP projects (number) 8) (P) SMEs assisted – energy efficiency (number) 9) (P) Large enterprises assisted – energy efficiency (number) 10) (S) Induced investments in projects for improving energy efficiency (indicative) (Meuro)



Global objectives	Specific objectives	Priority Axis 4 – Increasing energy efficiency and security of supply, in the context of combating climate change	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI 	<p>KAI 4.2 Valorisation of renewable energy resources for producing green energy</p> <ul style="list-style-type: none"> a) Supporting investments in upgrading and building new electricity generating capacity and heat by harnessing renewable energy resources: biomass, hydro resources (in units with installed capacity less than or equal to 10 MW), solar, wind, bio fuels, geothermal resources and other renewable energy resources. 	<ul style="list-style-type: none"> 1) (P) Installed supplementary energy capacity - RES sector (MW) 2) (P) New jobs created: <ul style="list-style-type: none"> - women - men 	<ul style="list-style-type: none"> 1) (P) Projects for capitalization of renewable energy sources (number) 2) (P) SMEs assisted – RES sector (number) 3) (P) Large enterprises assisted – RES sector (number) 4) (S) Induced investment in the capitalisation of RES (indicative) (MEuro)
	<ul style="list-style-type: none"> iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 4.3 Diversification of interconnection networks in view of strengthening security of energy supply</p> <ul style="list-style-type: none"> a) Supporting investments for interconnecting the national transport networks for electricity and natural gas to the European networks 	<ul style="list-style-type: none"> 1) (P) New jobs created: <ul style="list-style-type: none"> - women - men 2) (S) Induced investments in projects for transportation network interconnection <ul style="list-style-type: none"> - energy sector - natural gas sector (indicative) (MEuro) 	<ul style="list-style-type: none"> 1) (P) Transportation network interconnections (number): <ul style="list-style-type: none"> - electric energy sector - natural gas sector

Global objectives	Specific objectives	Priority Axis 5 – Technical Assistance	...measured by result indicators...	...determined by the following outputs
<p>The increase of Romanian companies' productivity, in compliance with the principles of sustainable development and reducing the disparities compared to the average productivity of EU compared to the average productivity of EU.</p>	<ul style="list-style-type: none"> i. Consolidation and environment-friendly development of the Romanian productive sector ii. Establishment of a favourable environment for sustainable enterprises' development iii. Increase of the R&D capacity, stimulation of the cooperation between RDI institutions and enterprises and increase of enterprises' access to RDI iv. Valorisation of the ICT potential and its application in the public (administration) and private sector (enterprises, citizens) v. Increased energy efficiency and sustainable development of the energy sector 	<p>KAI 5.1 Support to SOP IEC management, implementation, monitoring and control</p> <ul style="list-style-type: none"> a) Management, implementation, monitoring and control of SOP IEC 	<p>- <i>No result indicators</i></p>	<ul style="list-style-type: none"> 1) (P) Meetings of relevant committees and working groups (number) 2) (P) Participant training-days (number)
		<p>KAI 5.2 Support for communication, evaluation and IT/other equipment acquisition</p> <ul style="list-style-type: none"> a) Communication b) Evaluation c) IT Development 	<p>- <i>No result indicators</i></p>	<ul style="list-style-type: none"> 1) (P) Participant training-days (number) 2) (P) Communication and promotion events (number) 3) (P) Mass-media campaigns (number) 4) (P) Web site visits (number) 5) (P) Information requests received by the Information Centre (number)



The following **preliminary conclusions** can be observed from analysing the link between objectives and indicators at the level of SOP IEC:

1. No indicator has been identified to remain outside the objectives of the OP;
2. Given the logical “top-down” approach in establishing indicators (from objectives to indicators), indicators have been appropriately assigned to a certain PA/KAI.
3. In respect to the third topic of the analysis, “objectives that cannot be measured for lack of indicators”, we can state that all KAIs were assigned output indicators for the operations they support, as well as related results.
4. In terms of result indicators, the PA 5 - Technical Assistance is not covered by any result indicators. It is also the case for KAI 1.2, which is not measured by any result indicator.
5. Due to the 2009 exercise of improving the list of indicators there are cases when programme indicators overlap, partially, with supplementary indicators. For example:
 - KAI 1.2, programme indicator “*SMEs benefitting from guarantees (number)*” overlaps with supplementary indicator “*SMEs supported through financial instruments: guarantee funds, risk capital funds (number)*”;
 - KAI 3.2, programme indicator “*Projects for electronic public services financed*” overlaps with supplementary indicator “*number of e-government projects financed*”.

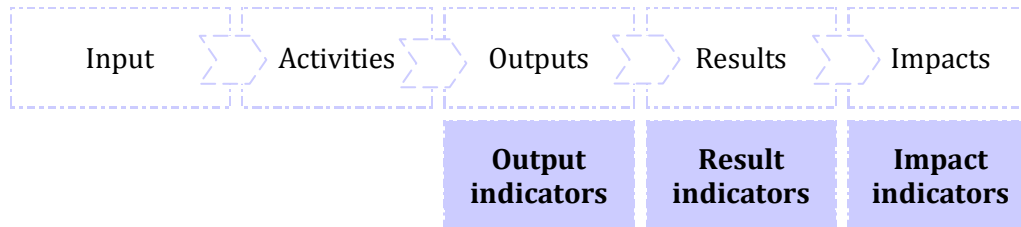
Other significant findings in relation to the coverage of SOP IEC system of indicators refer to the fact that:

- There are no **context indicators** assigned for SOP IEC (see previous section related to socio-economic context). Although this issue is not directly related to the objectives covered, their existence would enable a better understanding of the environment in which the SOP is implemented, of its objectives and achievements.

The overall conclusion is that objectives of SOP IEC are well covered by existing output and result indicators. Their quality is going to be assessed in the next sections.

2.1.3. LOGIC OF INTERVENTION

Starting from the strategic level (NSRF) and reaching the operational level (OP), the indicators system should reflect the programme objectives tree (see next figure). This analysis helps to assess whether indicators are appropriate to each level. While the “objectives covered” focuses on the horizontal correspondence between objectives and indicators, the logic of intervention examines the vertical relationship between input, output, result and impact indicators⁶.



As seen from the coverage table, the system of indicators at the level of SOP IEC follows a logical pattern, from inputs to outputs and results, and from operational objectives to specific and general objectives.

Effects on environment

Through its interventions, the Regional Operational Programme produces a series of outputs, results and impacts. The cause-effect relationship among these outputs, results and impact of the programme can be expressed through a series of **thematic areas**⁷:

1. **Infrastructure**: reflected as direct outputs, such as innovative structures, business support centres, development of electricity/gas distribution networks, and as results such as use of internet/broadband connections;
2. **Economic**: improved economic activity, reflected as result of investments in productive SMEs and large enterprises, creation of business infrastructure, development of R&D projects useful for enterprises;
3. **Research and development (R&D)**: reflected as direct outputs by the R&D projects developed, but also as results of these projects, having a high scientific value, patents applications, R&D articles in scientific publications;
4. **Trade/commerce**: reflected by the results of e –commerce applications, or as results of investments in preparation for market competition;
5. **Financial**: reflected as direct outputs by financial instruments such as guarantee funds and risk capital funds, but also as results of interventions, through the share of financial participation between the private and public sector;
6. **Social**: reflected by the number of jobs created as a result of the projects developed;
7. **Environment**: reflected, for example, as results of interventions in large combustion plants (LCPs);

⁶ This section will be reformulated in the final version of the Analysis Report and most of the methodological references will be moved to a separate, cover section, so as to avoid repetition across OPs.

⁷ Based on EC External Services Evaluation Unit – Outcome and impact level indicators – water and sanitation, Working paper April 2009

8. Energy: reflected as direct outputs, such as the projects for improving energy efficiency, and results like reduction of electric power consumption;
9. Management/administrative capacity: reflected as direct outputs, such as consulting services, analyses and studies, etc. and as results of the interventions such as adopted integrated management solutions;
10. Public services: reflected by the results of the e-applications developed, expressing the accessibility to different public services (e-health, e-government);
11. Awareness: reflected as direct outputs by the promotion/awareness events organised, information materials distributed, or as results of these interventions such as the number of participants to such events.

As graphically presented below, environmental effects (which may be positive and/or negative) occur, sometimes, in the case of the SOP IEC.

INPUTS -financial allocation	OUTPUTS	RESULTS	THEMATIC AREAS
Priority Axis 1 – An innovative and eco-efficient productive system			
KAI 1.1 Productive and environment friendly investments and preparation for market competition, especially of SMEs	Financial capacity (P) Projects supporting direct investment to SMEs (number) (P) Assisted SMEs - access to new markets (number) (P) Large enterprises assisted (number) (S) Weight of SMEs assisted in total no. of eligible SMEs (%) (S) Turnover increase in assisted SMEs (2 years after the project implementation) (%)	(P) New jobs created - SMEs investments in the productive sector - women, men (number)	Social Economic
	Technical capacity (P) Assisted SMEs - standards implementation (number)	(P) Certified SMEs - standards implementation (number)	Economic Environment Trade
KAI 1.2 Access to finance for SMEs	Financial (P) SMEs assisted through guarantee operations - financial instruments (P) SMEs assisted through risk capital funds - financial instruments (number) (P) Guarantee funds and risk capital funds developed - financial instruments	- No result indicators	Financial
KAI 1.3 Sustainable entrepreneurship development	Business infrastructure (P) New business support structures created (number) (P) Business support structures developed (number) (P) Assisted SMEs - consulting services acquisition (number) (S) Number of studies, analyses, reports, strategies	(S) Beneficiary's own contribution (lei)	Economic Infrastructure Management capacity

INPUTS -financial allocation	OUTPUTS	RESULTS	THEMATIC AREAS
Priority Axis 2 - Research, Technological Development and Innovation for Competitiveness			
KAI 2.1. R&D partnerships between universities/ research institutes, and enterprises for generating results directly applicable in the economy	R & D (P) Projects developed jointly by R&D institutions and enterprises (number) (P) R&D projects (number) (P) Assisted SMEs in R&D partnership projects, high scientific level R&D projects (number) (P) Large enterprises assisted in R&D partnership projects, high scientific level R&D projects (number)	(P) Private expenditure in assisted RDI projects (Meuro) (P) Public expenditure in assisted RDI projects (Meuro) (P) Patent applications resulted from R&D partnership projects, high scientific level R&D projects (number)	R & D Economic
	Personnel (S) Number of specialists from abroad employed	(P) Jobs created / maintained at the assisted beneficiaries (number)	Social
	Publications (S) Number of articles in scientific publications		R & D
KAI 2.2. Investments in RDI infrastructure and related administrative capacity	Infrastructure (P) R&D projects (number) (P) R&D centres connected to GRID structures (number) (P) Innovative structures developed - excellence poles (number)	(P) New jobs created - men, women (number)	Infrastructure Economic
	Administrative capacity (P) Institutions assisted for increasing administrative capacity (number)	(P) Public expenditure in assisted R&D projects (Meuro) (P) Private expenditure in assisted R&D projects (Meuro)	Financial Administrative capacity
KAI 2.3 RDI support for enterprises	Infrastructure (P) R&D projects (number) (P) Assisted SMEs in R&D projects - private R&D, infrastructure, technological innovation, young innovative enterprises (number) (P) Large enterprises assisted in R&D projects - private R&D, infrastructure, technological innovation (number)	(P) Private expenditure in assisted R&D projects (Meuro) (P) Public expenditure in assisted R&D projects (Meuro) (P) Patent applications resulted from technological innovation projects, young innovative enterprises projects (number)	Infrastructure Financial Economic
	Innovation (P) Number of start-ups developed (number) (P) Number of spin-offs	(P) New jobs created - men, women (number)	Social

INPUTS -financial allocation		OUTPUTS	RESULTS	THEMATIC AREAS
Priority Axis 3 - ICT for private and public sectors				
KAI 3.1. Supporting the ICT use	<p>Infrastructure</p> <p>(P) Number of ICT projects - electronic communication infrastructure</p> <p>(P) Broadband networks built - electronic communication infrastructure (number)</p>	<p>(P) SMEs connected to Internet via broadband connections - electronic communication infrastructure (number)</p> <p>(P) Public institutions connected to Internet via broadband connections - electronic communication infrastructure (number)</p> <p>(P) NGOs connected to Internet via broadband connections - electronic communication infrastructure (number)</p> <p>(P) School units/ inspectorates connected to Internet via broadband connections - electronic communication infrastructure (number)</p> <p>(P) Additional population that will be connected to broadband networks - electronic communication infrastructure (number)</p>	Infrastructure	
KAI 3.2 Developing and increasing the efficiency of public electronic services	<p>Infrastructure</p> <p>(P) Number of ICT projects</p> <ul style="list-style-type: none"> - e-government - e-learning - e-health - inter-operability <p>(P) Systems for which interoperability is ensured (number)</p> <p>(S) Number of e-government projects financed</p> <p>(S) Number of inter-operability projects financed</p> <p>(S) Number of e-learning projects financed</p> <p>(S) Number of e-health projects financed</p>	<p>(P) Users of e-government electronic means (number)</p> <p>(P) Users of e-learning electronic means (number)</p> <p>(P) Users of e-health electronic means (number)</p> <p>(P) Users of inter-operability electronic means (number)</p>	<p>Public services</p> <p>Infrastructure</p>	
KAI 3.3 Sustaining the e-Economy	<p>Management capacity</p> <p>(P) Number of ICT projects</p> <ul style="list-style-type: none"> - electronic solutions for businesses - electronic applications for business management <p>(P) IT systems implemented/ extended - electronic solutions for businesses (number)</p> <p>(P) IT systems implemented/ extended - electronic applications for business management</p>	<p>(P) SMEs using integrated management informatics systems (number)</p> <p>(P) SMEs using electronic commerce informatics systems (number)</p>	<p>Management capacity</p> <p>Commercial</p> <p>Infrastructure</p>	

INPUTS -financial allocation	OUTPUTS	RESULTS	THEMATIC AREAS
Priority Axis 4 - Increasing energy efficiency and security of supply, in the context of combating climate change			
KAI 4.1 Efficient and sustainable energy (improving energy efficiency and environmental sustainability of the energy system)	Energy efficiency (P) Projects for improving energy efficiency (number) (P) SMEs assisted - energy efficiency (number) (P) Large enterprise assisted - energy efficiency (number) (S) Induced investments in projects for improving energy efficiency (indicative) (MEuro)	(P) Reduction of electric power absorbed from the system (MW) (P) Reduction of natural gas quantity absorbed from the network (MWh) (P) Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh) (P) Reduction of technological losses in the distribution network (%) - electric energy sector - natural gas sector	→ Energy → Economic
	Infrastructure (P) Length of transportation network extended / modernised - electric energy sector (km) (P) Length of transportation network extended / modernised - natural gas sector (km) (P) Length of transportation network extended / modernised - oil sector (km) (P) Length of distribution network extended / modernised - electric energy sector (km) (P) Length of distribution network extended / modernised - natural gas sector (km)	(P) New jobs created: - women - men	→ Social → Infrastructure
	Environment (P) Projects for improving air quality LCP projects (number)	(P) Increase of the retention capacity of SO ₂ emissions - Large combustion plants (t _{SO2}) (P) Increase of the retention capacity of NO _x emissions - Large combustion plants (t _{NOx}) (P) Increase of the retention capacity of dust - Large combustion plants (t _{dust} /KWh)	→ Environment
	Energy (P) Projects for capitalization of renewable energy sources (number) (P) SMEs assisted - RES sector (number) (P) Large enterprises assisted - RES sector (number) (S) Induced investment in the capitalisation of RES (indicative) (MEuro)	(P) Installed supplementary energy capacity - RES sector (MW) (P) New jobs created; women, men	→ Energy → Environment → Social
KAI 4.3 Diversification of interconnection networks in view of strengthening security of energy supply	Infrastructure (P) Transportation network interconnections (number): - electric energy sector - natural gas sector	(S) Induced investments in projects for transportation network interconnection - energy sector - natural gas sector (indicative) (MEuro) (indicative) (MEuro)	→ Financial

INPUTS -financial allocation			
	OUTPUTS	RESULTS	THEMATIC AREAS
Priority Axis 5 – Technical assistance			
KAI 5.1 Support to SOP IEC management, implementation, monitoring and control	Administrative capacity (P) Meetings of relevant committees and working groups (number) (P) Participant training-days (number)	- No result indicators	Administrative capacity
KAI 5.2 Support for communication, evaluation and IT/other equipment acquisition	(P) Participant training-days (number) (P) Communication and promotion events (number) (P) Mass-media campaigns (number) (P) Web site visits (number) (P) Information requests received by the Information Centre (number)	- No result indicators	Administrative capacity Awareness

As presented above, one **area** of impact of investments carried out under this OP is the “**environment**”. At the same time, “**infrastructure**” area, as financed under this OP, might have some further effects from the environment perspective, too.

In accordance with the provisions of the European and national environmental legislation, the ROP was subject of a Strategic Environment Assessment (SEA) which analysed the potential effects of the SOP IEC interventions on environment.

SEA addresses the issue of environmental effects at the “ex-ante” moment, before the actual implementation of the programme was initiated and it was carried out with precisely this purpose: to identify, mitigate and even annul from the outset the possible significant effects, especially negative, of the OP on environment.

Furthermore, in accordance with the European and national legislation in place, environmental monitoring should be carried out during programme implementation, and after their completion. For this purpose, the SEA reports proposed **environmental indicators**, to be incorporated into the overall system of monitoring of the OP, which could be used selectively based on the characteristics of the projects selected for funding.

The environmental indicators are instruments which evaluate the positive or negative state of the environment and the consequences of applied measures.

The general systematic stages completed in the analysis of environmental indicators, as recommended, by the SEA Report, for the SOP IEC were as follows:

- to identify the effects of interventions, based on the findings of the SEA Report for each area of intervention under the SOP IEC;
- to identify the environmental aspects affected, based on the SEA Report. For an ease reference these aspects were grouped into six main categories⁸;
- to establish a correlation among different indicators proposed in SEA and the environmental aspects affected;

⁸ 1. AMBIENT and AIR QUALITY; 2. CLIMATE CHANGE; 3. WATER and SOIL; 4. BIODIVERSITY, LANDSCAPE and CULTURAL HERIRAGE; 5. POPULATION and HUMAN HEALTH; 6. RESOURCES and ENERGY EFFICIENCY



- to correlate the SEA proposed indicators with the ones considered for further environmental monitoring by the MA SOP IEC.

2.1.4. CORE INDICATORS

The following table shows the correspondence between the core indicators and the existing indicators of SOP IEC. At system level:

TABLE 5 CORE INDICATORS IN SOP IEC

Selected CORE Indicators that apply to SOP IEC	SOP IEC Indicators	Comments
(4) Number of RTD projects	R & D projects	It was introduced as output indicator for PA 2
(5) Number of cooperation projects enterprises – research institutions	Projects developed jointly by R&D institutions and enterprises	It was introduced as output indicator for PA 2
(6) Research jobs created	Jobs created / maintained at the assisted beneficiaries New jobs created – men, women	It was introduced as result indicator for PA 2
(7) Number of projects (Direct investment aid to SME)	Projects supporting direct investment to SMEs	It was introduced as output indicator for PA 1
(8) Number of start-ups supported	Number of start-ups developed	It was introduced as output indicator for PA 2
(9) Jobs created (gross, full time equivalent) (Direct investment aid to SME)	New jobs created - SMEs investments in the productive sector – women, men	It was introduced as result indicator for PA 1
(10) Investment induced (million euro)	-	It can be determined from financial monitoring.
(11) Number of projects (information society)	Number of ICT projects – electronic communication infrastructure Number of ICT projects - e-government - e-learning - e-health - inter-operability Number of ICT projects - electronic solutions for businesses - electronic applications for business management	The core indicator is covered by adding the three indicators introduced in the SOP IEC, as output indicators for PA 3
(12) Number of additional population covered by broadband access	Additional population that will have access to broadband networks – electronic communication infrastructure	It was introduced as result indicator for PA 3



(23) Number of projects (renewable energy)	Projects for capitalization of renewable energy sources	It was introduced as output indicator for PA 4
(24) Additional capacity of renewable energy production (MW)	Installed supplementary energy capacity - RES sector (MW)	It was introduced as result indicator for PA 4

Core indicators suggested by the European Commission (Working Document 7) are highly relevant for monitoring of SOP IEC objectives, PA 1 to PA 5 objectives.

At the level of individual indicators, the **preliminary conclusion** that can be drawn from the analysis there is one CORE indicator that is not integrated in the current system, namely (10) Investment induced, which reflects the investment in enterprise supporting projects. It can be determined from financial monitoring, as the beneficiary's co-financing and therefore it is not necessary to be introduced in the system.



2.2. BALANCE

In order to assess the balance of the indicators system of SOP IEC, two main issues were analysed:

- 1) **Balance by types of indicators** (input, output, result, impact).
- 2) **Proportionality**

The analysis of proportionality started from the guidelines provided by the EC Working Document No. 2⁹:

"The scale of the Operational Programme should be considered in the context of the indicator system proposed. In particular for the measurement of impacts, methodologies used should reflect the size of the interventions.

The indicator systems of complex programmes (e.g., within the Convergence Objective) with a high number of priorities and measures will necessarily be more difficult to manage than the system of a smaller programme. The challenge is to design indicator systems as complex as necessary and as small as possible under the specific circumstances of a specific programme. The aim is not to achieve an equal coverage of all programme and priority objectives. The impact and result indicators should cover priorities or measures which represent the bulk of expenditure or are of strategic importance from the point of view of programme objectives or the information needs of the potential users."

The following aspects were extracted as being the most relevant for the analysis:

- Result and impact indicators need most care and are not necessary to be assigned to every intervention financed under the programme. Result indicators were given careful consideration and were chosen as the first criterion;
- Complexity of the intervention should be taken into account; in the sense of this analysis, a complex intervention within SOP IEC is one with several possible results and/or with long term or complicated implementation¹⁰;
- The system of indicators should take into account the scale of the intervention; therefore, financial allocation was one of the criteria for analysis.

The analysis was based both on the quantitative data provided by the next table (number of indicators, financial allocation) and on qualitative information, such as types of interventions (indicative operations and activities) supported by each PA. A summary of these is presented in the *Objectives Covered* sub-section. More details can be found in the Operational Programme and in the Framework Document of Implementation. As such:

⁹ DG Regional Development, Indicative Guidelines on Evaluation Methods: Monitoring and Evaluating Indicators, Working Document No.2, Aug.2006, p.21 [Note: Methodological details will be removed in the final version and transferred in the overall cover section of the Analysis Report, to avoid duplication]

¹⁰ Own interpretation, starting from the EC understanding of a complex programme

Funds ¹¹ (MEUR)	Categories				Total
	Input (allocation)	Output	Result	Impact	
Axis 1: 1,080	36%	13	3	1	17
Axis 2: 646	21%	15	11	1	27
Axis 3: 469	16%	11	11	1	23
Axis 4: 726	24%	15	12	2	29
Axis 5: 90	3%	7	0	0	7
Total funds: 3,011	100% (13.3% of NSRF)	61	37	5	103

In respect to analyzing the **split between the output/result indicators**, the following observations can be made:

- Priority Axis 1 has only three result indicators, comparing to 13 output indicators. As this PA comprises one KAI which is not measured by any result indicator, it should be analysed the necessity of introducing new result indicators;
- Priority Axis 2 has a good proportion between the output and result indicators. However, there is a need to analyse any potential overlap between the existing indicators;
- Priority Axis 3 has an equal number of output and result indicators. Attention should be paid to the indicators' definition (possible overlaps between supplementary and programme indicators);
- Priority Axis 4 also seems to have a good proportion between the output and result indicators. Still there is a need for further analysis related to indicators' definition and correlation with the financed measures;
- Priority Axis 5 has only seven output indicators and no result indicators. Attention should be paid to potential misappropriation of result indicators as direct output.

In respect to **proportionality (financial allocation vs. the number of result indicators and complexity of the intervention)**, the following observations can be made:

- Priority Axis 1 has the largest allocation (marked by +) and a high complexity (also marked by +). The PA 1 has a small number of indicators compared to the other PAs and the split between output and result indicator is not proportional (marked by -).
- Priority Axis 2 has a relatively high allocation, (+) and a large number of indicators (+), divided almost equally between the two categories (output and result). PA 2 is also relatively complex (+);
- Priority Axis 3 has a small allocation compared to PA 1 – less than a half (marked with -), and a relatively high number of result indicators (+). However, PA3 is relatively complex (+).

¹¹Based on: Financial plan of the SOP IEC giving, for the whole programming period, the amount of the total financial allocation of each fund in the operational programme, the national counterpart and the rate of reimbursement by priority axis, Chapter 4 - Financial Plan, SOP IEC, EN version, 2007, p. 98

- Priority Axis 4 has the second largest allocation (marked with +) and a large number of output and result indicators (marked with +). PA 4 finances projects in the field of energy having a high level of complexity (marked with +).
- Priority Axis 5 has the smallest allocation (marked with -) and a small number of output indicators and no result indicator (marked with -). By its nature, PA 5 (Technical assistance) (marked with -), finances interventions less complex (also marked with -).

In interpreting the size of the allocation, comparisons were done within the programme, between the priority axes. If considered at the level of NSRF, all PAs under SOP-IEC have a large allocation. However, an intra-programme assessment was considered more appropriate, since the allocation depends, among others, by the nature of the projects (for example, infrastructure projects, although small, must have a larger allocation than administrative capacity development projects, which may be much more complex).

The analysis is synthesized in the following table:

	PA 1	PA 2	PA 3	PA 4	PA 5
Number of indicators	-	+	+	+	-
Complexity	+	+	+	+	-
Financial allocation	+	+	-	+	-
	Acceptable, additional indicators may be added	Balanced	Acceptable, caution is necessary when adding new indicators	Balanced	Balanced

PA 1 has a large financial allocation and high complexity. The results are assessed through only three indicators, and one KAI is not covered at all by result indicators. The quality of the existing ones should be analysed in order to determine the opportunity of adding new ones.

Priority Axis 2 has a relatively high financial allocation and complexity, and a large number of indicators, both output and result. Further qualitative analysis should be undertaken to determine the quality of the indicators and the possible overlaps.

PA 3 has a relatively high complexity and number of result indicators, although the financial allocation is small, compared to PA 1.

PA 4 is very similar to PA 2, having a high complexity and a fair balance between the output and result indicators.

PA 6 has only output indicators, justified by the low complexity of the projects. However the lack of result indicators should be analysed and new indicators should be introduced only with caution.

Preliminary conclusions:

The overall conclusion is that SOP IEC has an acceptable level of balance.

Out of five PAs, PA3 has a more result indicators than output, being advisable to reduce their number in order to increase the balance between the output and result indicators within the KAIs, on one hand, and between the indicators assigned to each Priority Axis within the SOP.



For the balanced PAs, caution is necessary in adding new indicators. Any recommendation in this respect should be made in relation to the findings and conclusions of all the other chapters of the analysis.

2.3. MANAGEABILITY

2.3.1. OVERVIEW

This section assesses the main processes involved in working with SOP IEC indicators, namely collecting, measuring, processing, monitoring and communicating/reporting. The analysis covers also briefly the institutional context, the procedures and the resources available for running the above mentioned processes, taking into account the specificities of SOP IEC.

Institutions

The implementation of SOP IEC is made within a complex institutional architecture, made up of the following institutions:

Institutions in charge with SOP IEC indicators	Types of indicators	Role
Managing Authority for SOP IEC	<ul style="list-style-type: none"> - Financial - Performance 	<ul style="list-style-type: none"> - Defining - Collecting - Processing - Measuring (Analysing) - Monitoring - Communication
Four Intermediate Bodies	<ul style="list-style-type: none"> - Financial - Performance 	<ul style="list-style-type: none"> - Defining - Collecting - Processing - Measuring (Analysing) - Monitoring - Communication

Managing Authority

The management and implementation of SOP IEC are set up by EC Regulation no. 1083 / 2006 and the EC Regulation no. 1828 / 2006. The SOP IEC MA is organised and functions as a General Direction within the Ministry of Economy, Trade and Business Environment.

Intermediate Bodies

In accordance to the Delegation Agreements, Intermediate Bodies perform the following functions in relation to the Priority Axis they are in charge with, for and on behalf of the MA:

- Information and publicity;
- Preparing the launch of the calls for projects and selection of projects;
- Contracting;
- Monitoring;
- Financial management and control;
- Irregularities.



Given the significant differences between the four main priority axes of SOPIEC, the input from IBs to the AM is exceptionally important for all functions, including those MA specific, such programming.

According to Government Decision no. 497/2004 regarding the creation of the institutional framework for the coordination, implementation and management of the Structural Funds, as amended and extended by the Governmental Decision no. 1179/2004, the Governmental Decision no. 128/2006 and the Emergency Governmental Ordinance no. 24/April 2007, the Intermediate Bodies appointed for SOP IEC are the following:

Priority Axis	Intermediate Body
Priority Axis 1: An innovative and eco-efficient system of production (<i>exceptions: Op. Large Enterprises under PA1</i>)	Ministry of Economy, Trade and Business Environment, through the Department for the Management of the Community Funds for Small and Middle Companies– SME IB
Priority Axis 2: Research, Technological Development and Innovation for Competitiveness	Ministry of Education, Research, Youth and Sports (National Authority for Scientific Research) – Research IB
Priority Axis 3: ICT for the private and public sectors	Ministry of Communications and Information Society (Intermediate Body for Promoting the Information Society) – PSI IB
Priority Axis 4: Increase of energy efficiency and security of supply, in the context of fight against climate changes	Ministry of Economy, Trade and Business Environment, through the General Department for Energy, Oil and Gas – Energy IB

Priority Axis 5 is directly managed by the Managing Authority, as well as the “Large Enterprises” Operation, within PA1. As for all the OPs implemented through IBs, the functionality of the system is significantly influenced by the performance of the IBs, on the one hand and on the quality of the instructions and guidance received from the MA, on the other hand. Any of the factors may influence the performance in respect to using indicators.

One specific feature of the SME IB is its territorial representation – through the regional offices for SMEs.

As seen from the table, two of the IBs of SOP IEC are not directly connected institutionally with the MA SOP IEC (Research IB and PSI IB), in the sense that they are separate entities - Ministry of Communications and Information Society and National Authority for Scientific Research. This implies a double sub-ordination structure, to the MA by the Delegation Agreement and to ministries, by organizational chart. This, doubled by the clearly defined difference among the focus of the PAs has often lead to a greater autonomy of the IBs in performing their tasks as compared to other OPs.

Another factor that may influence the manageability of the system is the relationship between the managing structures (MA/IBs) and beneficiaries. In the case of SOP IEC, these are represented by:

- Enterprises
- Universities and research institutions
- Local Public Authorities and administrative units
- Public health units
- Public bodies at local level
- Spin-offs and start-ups



- NGOs
- Ministries and other central public authorities
- Inter-community development agencies
- Libraries
- Electricity, gas, oil transport operators, as defined by specific legislation
- MA SOP IEC, as well as IBs, for PA 5.

The large variety of potential beneficiaries poses specific challenges in terms of communication and guidance from the MA/IBs. A number of aspects are noteworthy:

- PA1 beneficiaries - mainly enterprises – are an eclectic and heterogeneous target group, with limited experience in respect to EU projects implementation requirements and to public institutions work procedures. In this case, instructions and guidance are often regarded as complicated and unnecessarily bureaucratic.
- PA2 beneficiaries – private and public entities from the RDI sector – are already acquainted with publicly financed project implementation. Their relationship with the IB has already been consolidated by the participation in several other national or EU programmes.
- PA3 beneficiaries are again eclectic. On the one hand, the public bodies at local level (health units, administrative units, local authorities) are familiar with the public system work procedures, although they have limited experience or capacity in project implementation. On the other hand, private beneficiaries are similar to those under PA1. Finally, central public authorities have the necessary capacity for project implementation and are more closely connected institutionally to the IB.
- PA4 beneficiaries resemble all the categories mentioned above. On the one hand private beneficiaries are similar to those in PA1, while energy sector operators are closely linked to the IB.

In terms of indicator related processes, in practice, several bottlenecks were caused by the heterogeneity of beneficiaries and the lack of customized communication.

In respect to the allocation of responsibilities and resources, a detailed outlay of the staff allocated for each structure responsible for the management of SOP IEC, including monitoring and evaluation, is presented in their corresponding internal procedures. Additionally, the Description of the Management and Control System of SOP IEC includes a nominal overview of the organisational structure.

2.3.2. DEFINING INDICATORS

Defining indicators is the responsibility of MA SOP IEC, with significant input from the IBs. This is necessary because of the nature of the OP, targeting considerably different sectors (productive investments, research, ICT and energy). An initial list of programme indicators was defined during the programming exercise, validated through the ex-ante evaluation and approved by the EC as part of the OP.

Starting with 2009, an additional number of supplementary indicators were added, based on the consultations between SOP IEC MA. IBs and ACIS, so as to correct some deficiencies identified during the implementation and to improve correlation across OPs. These consultations were aimed at simplify the monitoring system, by avoiding the duplication of indicators in the case they



apply to more categories of interventions. At the same time, the exercise was meant to bring more clarity and value-added in the way each of the interventions is monitored.

The latest modifications brought to the system of indicators were included in the January 2011 version of the Framework Implementation Document.

Simplifying definitions

The simplification process led to the use of „Action Category”, following a common approach for all OPs¹². This enabled a potential reduction of the number of indicators.

However, the supplementary indicators and the Action Categories have not been yet recognized as such and included in any official SOP IEC documents by the MA. As a result, the Framework Document for Implementation is combining the indicator names with their respective Action Categories, without explaining the use of intervention categories (for e.g. “SMEs assisted through guarantee operations – financial instruments”, “School units/inspection having access to the Internet via broadband connections – electronic communication infrastructure”). Allowing the use of Action Categories would greatly simplify the list of indicators. Also, the current list of Action Categories should not be seen as final, as in some cases, adding more categories may reflect and monitor better the nature of the interventions.

Clarifying definitions, labels and measurement units

Generally, the latest modifications brought to the system of indicators have solved the deficiencies in respect to definitions, redundant indicators, labels or measurement units, which are still affecting other OPs.

Some suggestions for further improvement are presented at the end of the chapter.

2.3.3. COLLECTING INDICATORS

Once the indicators were defined and included in the Framework Document for Implementation (both initial programme indicators and supplementary ones), their collection became mandatory, based on the SOP IEC procedures.

For SOP IEC, indicators are collected both by the MA (for *Large enterprises* operation under PA1 and PA5) and by the IBs, for PA 1, 2, 3 and 4. For PA1, indicators are collected at local and regional level as well, through the regional offices for SMEs.

However, project level information is not enough to collect all required SOP IEC indicators, which is quite obvious. Only some of the output indicators may be compiled based on direct information from beneficiaries. For result/context indicators, often a more complex analysis is required, which will imply more than information from beneficiaries (e.g. use of national statistics etc.). Other information, such as “number of projects” can be extracted directly from the electronic system.

One specific feature of the SOP IEC is the variety of information sources and stakeholders from which information may be gathered: national statistics, ministries and other public bodies. At the same time, the difference in the type of information is significant – from macro-economic data to research articles, broadband penetration rate and energy efficiency. This implies a closer link to official statistics and an enhanced capacity to analyse statistical indicators within the SOP IEC MA and IBs.

¹² In order to avoid redundancy, a more description of the use of action categories is introduced in the cover section of the Analysis Report.



For the indicators which cannot be calculated based on input from beneficiaries, there is a need to define in a more clear way the collection procedure. This applies mainly to result and context indicators.

2.3.4. PROCESSING AND MEASURING INDICATORS

Vertical aggregation

Connecting project level to programme level indicators is crucial to facilitate proper processing and measuring of SOP IEC indicators. Currently, there is an improved match between the indicators required in the application process, the ones required in the progress/financial reporting and the programme indicators. The Applicants' Guide and the application form provide a number of compulsory indicators, relevant for the respective KAI, while allowing the beneficiary to include some additional project indicators, as well.

Horizontal aggregation

Processing and measuring some of SOP IEC interventions cannot be done completely independent from other OPs. In order to achieve this, a coherent, common approach would highly improve the quality and the added value of the information obtained through aggregating indicators.

Consequently, in order to allow aggregation at NSRF level, there should be a match between the definition/label of the SOP IEC and other OPs. One relevant example is the indicator "number of jobs created", which should be aggregated across OPs.

Another relevant example is environmental impact indicators, such as "Number of projects for improving air quality", which must be consistent with the used under SOP ENV – together, they contribute to reporting core indicator 28.

Another relevant case for horizontal coordination in using indicators within SOP IEC is related to the use of TA indicators (see also OPTA analysis).

2.3.5. PROGRESS MONITORING

Through an addendum to the Delegation Agreement, MA SOP IEC delegated to IBs tasks related to contracts' monitoring. As stated earlier, the quality of the monitoring is heavily influenced by the performance of the IBs and by the guidance provided by the MA.

One specific feature of SOP IEC is the large number of projects, which poses significant challenges to the staff. Also, the differences between the various types of projects/beneficiaries pose additional difficulties.

Another specific feature is the length of the implemented projects, often less extended than in the case of other OPs. This enables more updates on real progress and a more accurate monitoring.

2.3.6. COMMUNICATION

In terms of communication and reporting, the specific of the programme is reflected in the variety of target groups and of indicators for which information must be provided. On the other hand, the shorter duration of projects enables for more updates and more accurate data on real progress.



Preliminary conclusions

Given all the above, a number of preliminary conclusions regarding manageability can be reached:

- The use of Action Categories can be helpful in simplifying definitions. On the other hand, some of the existing Action Categories are not reflecting properly the specificities of covered interventions (e.g. TA AC)
- The process of collecting result/context indicators can be quite demanding, in the sense of requiring adequate and accurate statistics, in a number of sectors.
- For several interventions, collection and progress monitoring is heavily dependent on the capacity of the beneficiaries and of the IBs.
- Progress monitoring is heavily influenced by the large number of projects.
- Communication of SOP IEC indicators depends on the variety of target groups, their different interests and different levels of awareness.

2.4. PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS ON THE SYSTEM, AFFECTING THE ANALYSIS OF INDIVIDUAL INDICATORS

Based on the findings from the analysis of the system of indicator – coverage, balance, manageability – a number of recommendations can be presented in respect to the individual indicators, as presented in the following table.

TABLE 6 OVERALL ANALYSIS OF THE SYSTEM OF INDICATORS

KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
KAI 1.1	1.	Projects supporting direct investment to SMEs (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 300 – SME investments, productive sector	Matches core indicator (7)	-	-
	2.	Assisted SMEs - standards implementation (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Assisted SMEs (number)</i> ” Use with AC 302 – Standards implementation	-	-	Improved manageability; allows the use of ACs.
	3.	Assisted SMEs - access to new markets (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Assisted SMEs (number)</i> ” Use with AC 303 – Access to new markets	-	-	Improved manageability; allows the use of ACs.
	4.	Large enterprises assisted (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 301 – Large enterprises investments, productive sector	-	-	-
	5.	New jobs created - SMEs investments in the productive sector: -women - men (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>New jobs created: -women - men (number)</i> ” Use with AC 300 – SME investments, productive sector	Matches core indicator (9)	-	Improved manageability; allows the use of ACs.
	6.	Certified SMEs - standards implementation	P	Result	Keep and examine further in individual	Re-label as “ <i>Certified SMEs (number)</i> ” Use with	-	-	Improved manageability; allows the use of ACs.

¹³ P=programme, S=supplementary

KAI	Indicators	Type ¹³		Recommendation		Rationale		
						COVERAGE	BALANCE	MANAGEABILITY
	(number)			indicators analysis	AC 302 – Standards implementation			
	7. Weight of SMEs assisted in total number of eligible SMEs (%)	S	Output	Remove	-	-	-	It cannot be aggregated upwards from projects level. Difficult to determine the number of eligible SMEs.
	8. Turnover increase in assisted SMEs (2 years after the project implementation)	S	Output	Transfer to result indicators	Use with AC 300 – SME investments productive sector, AC 302 – Standards implementation, AC 303 – Access to new markets	Incorrectly assigned as output indicator.	-	
KAI 1.2	9. SMEs assisted through guarantee operations – financial instruments	P	Output	Transfer to result indicators Keep and examine further in individual indicators analysis	Re-label as “Assisted SMEs (number)” Use with AC 344 – Guarantee operations	Incorrectly assigned as output indicator.	-	Improved manageability; allows the use of ACs, ensures correlation across KAIs and OPs, more accurate labelling
	10. SMEs assisted through risk capital funds – financial instruments (number)	P	Output	Transfer to result indicators Keep and examine further in individual indicators analysis	Re-label as “Assisted SMEs (number)” Use with AC 345 – Risk capital funds	Incorrectly assigned as output indicator.	-	Improved manageability; allows the use of ACs, ensures correlation across KAIs and OPs, more accurate labelling
	11. Guarantee funds and risk capital funds developed – financial instruments	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Financial instruments developed” Use with AC 344 – Guarantee operations and AC 345 – Risk capital funds	-	-	Improved manageability; allows the use of ACs, ensures correlation across KAIs and OPs, more accurate labelling



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
KAI 1.3	12.	New business support structures created (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 306 – Business infrastructure	-	-	-
	13.	Business support structures developed (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 306 – Business infrastructure	-	-	-
	14.	Assisted SMEs – Purchase of consulting services (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Assisted SMEs (number)” Use with AC 307 – Purchase of consulting services	-	-	Improved manageability; allows the use of ACs, ensures correlation across KAIs and OPs,
	15.	Number of studies, analyses, reports, strategies	S	Output	Keep and examine further in individual indicators analysis	Use with AC AC 306 – Business infrastructure AC 307 – Purchase of consulting services AC 308 – Clusters/supply chains	-	-	-
	16.	Beneficiary’s own contribution (lei)	S	Result	Remove	Monitor as a financial indicator. Use to report core indicator (10) “Investment induced”	Corresponds to core indicator (10)	-	It can be easily collected by IBs and MA from the financial reports and it can be processed and reported from the financial management module
KAI 2.1	17.	Projects developed jointly by R&D institutions and enterprises (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 309 – R&D partnership	Matches core indicator (5)	-	-

KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
18.		R&D projects (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 309 – R&D partnership	Matches core indicator (4)	-	-
19.		Assisted SMEs in R&D partnership projects, high scientific level R&D projects (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Assisted SMEs (number)” Use with AC 309 – R&D partnership, AC 310 – R&D of high scientific value	-	-	Improved manageability; allows the use of ACs.
20.		Large enterprises assisted in R&D partnership projects, high scientific level R&D projects (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Large enterprises assisted (number)” Use with AC 309 – R&D partnership, AC 310 – R&D of high scientific value	-	-	Improved manageability; allows the use of ACs.
21.		Jobs created / maintained at the assisted beneficiaries (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “New jobs created - women - men (number)” AC 309 – R&D partnership, AC 310 – R&D of high scientific value	The number of jobs created matches core indicator (6)	-	The jobs maintained should remain a project level indicator, so the indicator at programme level be consistent across KAIs and OPs.
22		Private expenditure in assisted RDI projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It is not a programme indicator. It can be easily obtained by IBs and MA from the financial reports. There is no need to be introduced in the system of indicators.



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	23.	Public expenditure in assisted RDI projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It is not a programme indicator. It can be easily obtained by IBs and MA from the financial reports. There is no need to be introduced in the system of indicators.
	24.	Patent applications resulted from R&D partnership projects, high scientific level R&D projects (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>Patent applications (number)</i> ” Use with AC 309 – R&D partnership, AC 310 – R&D of high scientific value	-	-	Improved manageability; allows the use of ACs.
	25.	Number of specialists from abroad employed	S	Output	Keep and examine further in individual indicators analysis	AC 310 – R&D of high scientific value	-	-	-
	26.	Number of articles in scientific publications	S	Output	Keep and examine further in individual indicators analysis	Use with Use with AC 309 – R&D partnership, AC 310 – R&D of high scientific value	-	-	-
KAI 2.2	27.	R&D projects (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 311 – R&D public infrastructure, AC 314 – R&D international networks	Matches core indicator (4)	-	-
	28.	R&D centres connected to GRID structures (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 314 – R&D international networks	-	-	-



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	29.	Innovative structures developed - excellence poles (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as <i>“Innovative structures developed (number)”</i> Use with AC 313 – Excellence poles	-	-	Improved manageability; allows the use of ACs.
	30.	Institutions assisted for increasing administrative capacity (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as <i>“Public institutions assisted (number)”</i> Use with AC 315 – Administrative capacity	-	-	Improved manageability; allows the use of ACs. More accurate labelling
	31.	New jobs created (men, women) (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as <i>“New jobs created; - women - men (number)”</i> Use with AC 314 – R&D international networks	Matches core indicator (6)	-	Improved manageability – consistency across KAIs
	32.	Public expenditure in assisted R&D projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It is not a programme indicator. It can be easily obtained by IBs and MA from the financial reports. There is no need to be introduced in the system of indicators.
	33.	Private expenditure in assisted R&D projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It is not a programme indicator. It can be easily obtained by IBs and MA from the financial reports. There is no need to be introduced in the system of indicators.



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
KAI 2.3	34	R&D projects (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 317 - Innovative spin-off AC 316 - Innovative start-up AC 318 - Young innovative enterprises AC 333 - Technological innovation AC 312 - Private R&D infrastructure	Matches core indicator (4)	-	-
	35.	Assisted SMEs in R&D projects - private R&D infrastructure - technological innovation - young innovative enterprises (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as " <i>Assisted SMEs (number)</i> " Use with AC 312 - private R&D infrastructure, AC 318 - Young innovative enterprises AC 333 - Technological innovation	-	-	Improved manageability; allows the use of ACs.
	36.	Large enterprises assisted in R&D projects -private R&D infrastructure - technological innovation (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as " <i>Large enterprises assisted (number)</i> " Use with AC 333 - Technological innovation, AC 312 - Private R&D infrastructure	-	-	Improved manageability; allows the use of ACs.
	37.	Number of start-ups developed (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as " <i>Number of start-ups supported</i> " Use with AC 316 - Innovative start-ups	Matches core indicator (8) if re-labelled as recommended	-	Improved labelling
	38.	Number of spin-offs developed (number)	P	Output	Keep and examine further in individual indicators	Re-label as " <i>Spin-offs developed (number)</i> " Use with AC 317 - Innovative spin-	-	-	Improved labelling



KAI	Indicators	Type ¹³	Recommendation				Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
					analysis	offs			
	39. New jobs created - men - women (number)	P	Result	Keep and examine further in individual indicators analysis	Use with AC 316 – Innovative start-ups, AC 317 – Innovative spin-offs, AC 312 – R&D private infrastructure, AC 333 – Technological innovation, AC 318 – Young innovative enterprises	Matches core indicator (6)	-	-	
	40. Private expenditure in assisted R&D projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It can be easily obtained by IBs and MA from the financial reports.	
	41. Public expenditure in assisted R&D projects (Meuro)	P	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It can be easily obtained by IBs and MA from the financial reports.	
	42. Patent applications resulted from: - technological innovation projects - young innovative enterprises projects (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “Patent applications (number)” Use with AC 333 – Technological innovation, AC 318 – Young innovative enterprises	-	-	-	
KAI 3.1	43. Number of ICT projects – electronic communication infrastructure	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ICT projects (number)” Use with AC 323 – Inter-operability, AC 324 – Electronic applications for business management,	It contributes to reporting the core indicator (11).	-	Although the number of projects can be easily obtained by the IBs and MA, this indicator will be maintained in the system for enabling reporting on core indicator.	



KAI	Indicators	Type ¹³		Recommendation		Rationale		
						COVERAGE	BALANCE	MANAGEABILITY
					AC – 325 – Electronic solutions for businesses			
44.	Broadband networks built - electronic communication infrastructure (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Broadband networks built (number)</i> ” Use with AC 319 – electronic communication infrastructure	-	-	Improved manageability; allows the use of ACs.
45.	SMEs connected to Internet via broadband connections - electronic communication infrastructure (number)	P	Result	Keep and examine further in individual indicators analysis Transfer to output indicators.	Re-label as “ <i>SMEs connected to broadband internet (number)</i> ” Use with AC 319 – electronic communication infrastructure	Incorrectly assigned as result indicator.	-	Improved manageability; allows the use of ACs.
46.	Public institutions connected to Internet via broadband connections – electronic communication infrastructure (number)	P	Result	Keep and examine further in individual indicators analysis Transfer to output indicators.	Re-label as “ <i>Public institutions connected to broadband internet (number)</i> ” Use with AC 319 – electronic communication infrastructure	Incorrectly assigned as result indicator.	-	Improved manageability; allows the use of ACs.
47.	NGOs connected to Internet via broadband connections – electronic communication infrastructure (number)	P	Result	Keep and examine further in individual indicators analysis Transfer to output indicators.	Re-label as “ <i>NGOs connected to broadband internet (number)</i> ” Use with AC 319 – electronic communication infrastructure	Incorrectly assigned as result indicator.	-	Improved manageability; allows the use of ACs.



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	48.	School units/ inspectorates connected to Internet via broadband connections – electronic communication infrastructure (number)	P	Result	Keep and examine further in individual indicators analysis Transfer to output indicators.	Re-label as “ <i>School units/ inspectorates connected to broadband internet (number)</i> ” Use with AC 319 – electronic communication infrastructure	Incorrectly assigned as result indicator.	-	Improved manageability; allows the use of ACs.
	49.	Additional population that will be connected to broadband networks – electronic communication infrastructure (number)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>Additional population covered by broadband access</i> ” Use with AC 319 – electronic communication infrastructure	Matches core indicator (12)	-	Improved manageability; allows the use of ACs.
KAI 3.2	50.	Number of ICT projects - e-government - e-learning - e-health - inter-operability	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>ICT projects (number)</i> ” Use with AC 320 – E-government, AC 321 – E-learning, AC 322 – E-health, AC 323 – Inter-operability	It contributes to reporting the core indicator (11).	-	Improved manageability; allows the use of ACs.
	51.	Systems for which interoperability is ensured (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 323 – Inter-operability	-	-	-
	52.	Registered users of e-government electronic means (number)	P	Result	Collapse in one indicator. Keep and examine	Label as “ <i>Registered users of electronic means (number)</i> ” Use with AC AC 320 – E-government,	-	-	Simplifies the list of indicators, allows the use of action categories.



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	53.	Registered users of e-learning electronic means (number)	P	Result	further in individual indicators analysis.	AC 321 – E-learning, AC 322 – E-health, AC 323 – Inter-operability	-	-	
	54.	Registered users of e-health electronic means (number)	P	Result			-	-	
	55.	Registered users of inter-operability electronic means (number)	P	Result			-	-	
	56.	(S) Number of e-government projects financed	S	Output	Remove		-	-	Partially overlaps with the programme indicator “Number of ICT projects - e-government - e-learning - e-health - inter-operability”, which matches the core indicator (11)
	57.	(S) Number of inter-operability projects financed	S	Output	Remove		-	-	Partially overlaps with the programme indicator “Number of ICT projects - e-government - e-learning - e-health - inter-operability”, which matches the core indicator (11)
	58.	(S) Number of e-learning projects financed	S	Output	Remove		-	-	Partially overlaps with the programme indicator “Number of ICT projects - e-government - e-learning



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
									<ul style="list-style-type: none"> - e-health - inter-operability”, which matches the core indicator (11)
	59.	(S) Number of e-health projects financed	S	Output	Remove		-	-	Partially overlaps with the programme indicator “Number of ICT projects <ul style="list-style-type: none"> - e-government - e-learning - e-health - inter-operability”, which matches the core indicator (11)
KAI 3.3	60.	Number of ICT projects <ul style="list-style-type: none"> - electronic solutions for businesses - electronic applications for business management 	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>ICT projects (number)</i> ” Use with AC 324 – electronic applications for business management, AC 325 - Electronic solutions for businesses	It contributes to reporting the core indicator (11).	-	Improved manageability, allows the use of action categories.
	61.	IT systems implemented/ extended – electronic solutions for businesses (number)	P	Output	Keep and examine further in individual indicators analysis	Label as “ <i>IT systems implemented/ extended (number)</i> ” Use with AC 325 - Electronic solutions for businesses	-	-	Simplifies the list of indicators, allows the use of action categories.
	62.	IT systems implemented/ extended – electronic applications for business	P	Output	Keep and examine further in individual indicators analysis	Label as “ <i>IT systems implemented/ extended (number)</i> ” Use with AC 324 - Electronic applications for business management	-	-	Simplifies the list of indicators, allows the use of action categories.

KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
		management							
	63.	SMEs using integrated management informatics systems (number)	P	Result	Keep and examine further in individual indicators analysis. Transfer to output indicators.	Use with AC 324 - Electronic applications for business management	Incorrectly assigned as result indicator.	-	
	64.	SMEs using electronic commerce informatics systems (number)	P	Result	Keep and examine further in individual indicators analysis Transfer to output indicators.	Use with AC 325 - Electronic solutions for businesses	Incorrectly assigned as result indicator.	-	
KAI 4.1	65.	Projects for improving energy efficiency (number)	P	Output	Remove	-	-	-	Simplifies the list of indicators. It can be easily obtained by IBs and MA from the contracts signed. There is no need to be introduced in the system of indicators.
	66.	Length of transportation network extended / modernised – electric energy sector (km)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Length of transportation network extended/ modernised (km)” Use with AC 326 - Electric energy sector	-	-	Improved manageability allows the use of ACs.
	67.	Length of transportation network extended / modernised – natural gas sector	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Length of transportation network extended/ modernised (km)” Use with AC 327 – Natural gas sector	-	-	Improved manageability allows the use of ACs.

KAI	Indicators	Type ¹³		Recommendation		Rationale		
						COVERAGE	BALANCE	MANAGEABILITY
	(km)							
68.	Length of transportation network extended / modernised – oil sector (km)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Length of transportation network extended/ modernised (km)</i> ” Use with AC 328 – Oil sector	-	-	Improved manageability allows the use of ACs.
69.	Length of distribution network extended / modernised – electric energy sector (km)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Length of distribution network extended/ modernised (km)</i> ” Use with AC 326 - Electric energy sector	-	-	Improved manageability allows the use of ACs.
70.	Length of distribution network extended / modernised – natural gas sector (km)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Length of distribution network extended/ modernised (km)</i> ” Use with AC 327 – Natural gas sector	-	-	Improved manageability allows the use of ACs.
71.	Projects for improving air quality – LCP projects (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Projects for improving air quality (number)</i> ” Use with AC 331 – Large combustion plants	Contributes to reporting on core indicator (28) Number of projects on improvement of air quality	-	Improved manageability allows the use of ACs.
72.	SMEs assisted – energy efficiency (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>SMEs assisted (number)</i> ” Use with AC 330 – Energy efficiency	-	-	Improves consistency across KAIs. Improved manageability allows the use of ACs.
73.	Large enterprises assisted – energy efficiency	P	Output	Keep and examine further in individual	Re-label as “ <i>Large enterprises assisted (number)</i> ”	-	-	Improves consistency across KAIs. Improved manageability

KAI	Indicators	Type ¹³		Recommendation		Rationale		
						COVERAGE	BALANCE	MANAGEABILITY
	(number)			indicators analysis	Use with AC 330 – Energy efficiency			allows the use of ACs.
74.	Reduction of electric power absorbed from the system (MW)	P	Result	Keep and examine further in individual indicators analysis	Use with AC 330 – Energy efficiency	-	-	-
75.	Reduction of natural gas quantity absorbed from the network (MWh)	P	Result	Keep and examine further in individual indicators analysis	Use with AC 330 – Energy efficiency	-	-	-
76.	Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh)	P	Result	Keep and examine further in individual indicators analysis	Use with AC 330 – Energy efficiency	-	-	-
77.	Reduction of technological losses in the distribution network (%) - electric energy sector - natural gas sector	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>Reduction of technological losses in the distribution network (%)</i> ” Use with AC 326 – Electric energy sector, AC 327 – Natural gas sector	-	-	Improved manageability allows the use of ACs.
78.	Increase of the retention capacity of SO ₂ emissions – Large combustion plants (t _{SO₂})	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>Increase of the retention capacity of SO₂ emissions (t_{SO₂})</i> ” Use with AC 331 – Large combustion plants	-	-	Improved manageability allows the use of ACs.
79.	Increase of the retention capacity of NO _x emissions –	P	Result	Keep and examine further in individual	Re-label as “ <i>Increase of the retention capacity of NO_x emissions (t_{NO_x})</i> ”	-	-	Improved manageability allows the use of ACs.

KAI	Indicators	Type ¹³		Recommendation		Rationale		
						COVERAGE	BALANCE	MANAGEABILITY
	Large combustion plants (t _{NOx})			indicators analysis	Use with AC 331 – Large combustion plants			
	80. Increase of the retention capacity of dust – Large combustion plants (t _{dust/KWh})	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>Increase of the retention capacity of dust (t_{dust/KWh})</i> ” Use with AC 331 – Large combustion plants	-	-	Improved manageability allows the use of ACs.
	81. New jobs created: - women - men	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>New jobs created: - women - men (number)</i> ” Use with AC 326 – Electric energy sector, AC 327 – Natural gas sector AC 328 – Oil sector	-	-	Improved manageability allows the use of ACs. Improves consistency across KAIs.
	82. Induced investments in projects for improving energy efficiency (indicative) (Meuro)	S	Output	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It can be easily obtained by IBs and MA from the financial reports.
KAI 4.2	83. Projects for capitalization of renewable energy sources (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “ <i>Number of projects (renewable energy)</i> ” to better match with the core indicator Use with AC 329 – RES sector	Matches core indicator (23)	-	-



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	84.	SMEs assisted – RES sector (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “SMEs assisted (number)” Use with AC 329 – RES sector	-	-	Improves consistency across KAIs. Improved manageability allows the use of ACs.
	85.	Large enterprises assisted – RES sector (number)	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Large enterprises assisted (number)” Use with AC 329 – RES sector	-	-	Improves consistency across KAIs. Improved manageability allows the use of ACs.
	86.	Installed supplementary energy capacity - RES sector (MW)	P	Result	Keep and examine further in individual indicators analysis	Re-label as “Installed supplementary energy capacity (MW)” Use with AC 329 – RES sector	Matches core indicator (24)	-	Improved manageability allows the use of ACs.
	87.	New jobs created: - women - men	P	Result	Keep and examine further in individual indicators analysis	Re-label as “New jobs created: - women - men (number)” Use with AC 329 – RES sector	-	-	Improves consistency across KAIs.
	88.	Induced investment in the capitalisation of RES (indicative) (MEuro)	S	Output	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It can be easily be obtained by IBs and MA from the financial reports.
KAI 4.3	89.	Transportation network interconnections (number): - electric energy sector - natural gas sector	P	Output	Keep and examine further in individual indicators analysis	Re-label as “Transportation network interconnections (number)” Use with AC 326 – Electric energy sector, AC 327 – Natural gas sector	-	-	-



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
	90.	New jobs created: - women - men	P	Result	Keep and examine further in individual indicators analysis	Re-label as “ <i>New jobs created:</i> - <i>women</i> - <i>men</i> <i>(number)</i> ” Use with AC 326 – Electric energy sector, AC 327 – Natural gas sector	-	-	Improves consistency across KAIs.
	91.	Induced investments in projects for transportation network interconnection - energy sector - natural gas sector (indicative) (MEuro)	S	Result	Remove	Monitor as a financial indicator (co-financing ensured by the beneficiary)	-	-	It can be easily obtained by IBs and MA from the financial reports.
KAI 5.1	92.	Meetings of relevant committees and working groups (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 701 – Management and coordination	-	-	-
	93.	Participant training-days (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 701 – Management and coordination	-	-	-
KAI 5.2	94.	Participant training-days (number)	P	Output	Keep and examine further in individual indicators	Use with AC 701 – Management and coordination	-	-	-



KAI		Indicators	Type ¹³		Recommendation		Rationale		
							COVERAGE	BALANCE	MANAGEABILITY
					analysis				
	95.	Communication and promotion events (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 705 – Communication and publicity	-	-	-
	96.	Mass-media campaigns (number)	P	Output	Keep and examine further in individual indicators analysis	Use with AC 705 – Communication and publicity	-	-	-
	97.	Web site visits (number)	P	Output	Keep and examine further in individual indicators analysis Transfer to result indicators	Use with AC 705 – Communication and publicity	Incorrectly assigned as output indicator		Consistency across KAIs and OPs
	98.	Information requests received by the Information Centre (number)	P	Output	Remove	-	PA 5 does not support the functioning of IC. Incorrectly assigned as output indicator		Consistency across KAIs and OPs



TABLE 7 - PRELIMINARY LIST OF INDICATORS RESULTING FROM THE SYSTEM LEVEL ANALYSIS (OUTPUT AND RESULT INDICATORS ALREADY IN USE, INCLUDING RECOMMENDATIONS MADE AT SYSTEM LEVEL)

	NO.	OUTPUT INDICATORS TO BE FURTHER ANALYSED AT INDIVIDUAL LEVEL	
<i>KAI</i>		<i>Indicators</i>	<i>Type¹⁴</i>
KAI 1.1	1.	Projects supporting direct investment to SMEs (number)	P
	2.	Assisted SMEs - standards implementation (number)	P
	3.	Assisted SMEs - access to new markets (number)	P
	4.	Large enterprises assisted (number)	P
	5.	Turnover increase in assisted SMEs (2 years after the project implementation)	S
KAI 1.2	6.	SMEs assisted through guarantee operations – financial instruments	P
	7.	SMEs assisted through risk capital funds – financial instruments (number)	P
	8.	Guarantee funds and risk capital funds developed – financial instruments	P
KAI 1.3	9.	New business support structures created (number)	P
	10.	Business support structures developed (number)	P
	11.	Assisted SMEs – Purchase of consulting services (number)	P
	12.	Number of studies, analyses, reports, strategies	S
KAI 2.1	13.	Projects developed jointly by R&D institutions and enterprises (number)	P
	14.	R&D projects (number)	P
	15.	Assisted SMEs in R&D partnership projects, high scientific level R&D projects (number)	P
	16.	Large enterprises assisted in R&D partnership projects, high scientific level R&D projects (number)	P
	17.	Number of specialists from abroad employed	S
	18.	Number of articles in scientific publications	S
KAI 2.2	19.	R&D projects (number)	P
	20.	R&D centres connected to GRID structures (number)	P
	21.	Innovative structures developed - excellence poles (number)	P
	22.	Institutions assisted for increasing administrative capacity (number)	P
KAI 2.3	23.	R&D projects (number)	P
	24.	Assisted SMEs in R&D projects - private R&D infrastructure - technological innovation - young innovative enterprises (number)	P

¹⁴ P=programme, S=supplementary



	NO.	OUTPUT INDICATORS TO BE FURTHER ANALYSED AT INDIVIDUAL LEVEL	
<i>KAI</i>		<i>Indicators</i>	<i>Type¹⁴</i>
	25.	Large enterprises assisted in R&D projects -private R&D infrastructure - technological innovation (number)	P
	26.	Number of start-ups developed (number)	P
	27.	Number of spin-offs developed (number)	P
KAI 3.1	28.	Number of ICT projects – electronic communication infrastructure	P
	29.	Broadband networks built - electronic communication infrastructure (number)	P
KAI 3.2	30.	Number of ICT projects - e-government - e-learning - e-health - inter-operability	P
	31.	Systems for which interoperability is ensured (number)	P
KAI 3.3	32.	Number of ICT projects - electronic solutions for businesses - electronic applications for business management	P
	33.	IT systems implemented/ extended – electronic solutions for businesses (number)	P
	34.	IT systems implemented/ extended – electronic applications for business management	P
KAI 4.1	35.	Length of transportation network extended / modernised – electric energy sector (km)	P
	36.	Length of transportation network extended / modernised – natural gas sector (km)	P
	37.	Length of transportation network extended / modernised – oil sector (km)	P
	38.	Length of distribution network extended / modernised – electric energy sector (km)	P
	39.	Length of distribution network extended / modernised – natural gas sector (km)	P
	40.	Projects for improving air quality – LCP projects (number)	
	41.	SMEs assisted – energy efficiency (number)	P
	42.	Large enterprises assisted – energy efficiency (number)	P
KAI 4.2	43.	Projects for capitalization of renewable energy sources (number)	P
	44.	SMEs assisted – RES sector (number)	P
	45.	Large enterprises assisted – RES sector (number)	P
KAI 4.3	46.	Transportation network interconnections (number): - electric energy sector	P



	NO.	OUTPUT INDICATORS TO BE FURTHER ANALYSED AT INDIVIDUAL LEVEL	
<i>KAI</i>		<i>Indicators</i>	<i>Type¹⁴</i>
		- natural gas sector	
KAI 5.1	47.	Meetings of relevant committees and working groups (number)	P
	48.	Participant training-days (number)	P
KAI 5.2	49.	Participant training-days (number)	P
	50.	Communication and promotion events (number)	P
	51.	Mass-media campaigns (number)	P
	52.	Web site visits (number)	P

	No.	RESULT INDICATORS TO BE FURTHER ANALYSED AT INDIVIDUAL LEVEL	
<i>KAI</i>		<i>Indicator</i>	<i>Type</i>
KAI 1.1	53.	New jobs created – SMEs investments in the productive sector: -women - men (number)	P
	54.	Certified SMEs – standards implementation (number)	P
KAI 2.1	55.	Jobs created / maintained at the assisted beneficiaries (number)	P
	56.	Patent applications resulted from R&D partnership projects, high scientific level R&D projects (number)	P
KAI 2.2	57.	New jobs created (men, women) (number)	P
KAI 2.3	58.	New jobs created - Men - women (number)	P
	59.	Patent applications resulted from: - technological innovation projects - young innovative enterprises projects (number)	P
KAI 3.1	60.	SMEs connected to Internet via broadband connections – electronic communication infrastructure (number)	P
	61.	Public institutions connected to Internet via broadband connections – electronic communication infrastructure (number)	P
	62.	NGOs connected to Internet via broadband connections – electronic communication infrastructure (number)	P
	63.	School units/inspectors connected to Internet via broadband connections – electronic communication infrastructure (number)	P
	64.	Additional population that will be connected to broadband networks – electronic communication infrastructure (number)	P



	No.	RESULT INDICATORS TO BE FURTHER ANALYSED AT INDIVIDUAL LEVEL	
<i>KAI</i>		<i>Indicator</i>	<i>Type</i>
KAI 3.2	65.	Registered users of e-government electronic means (number)	P
	66.	Registered users of e-learning electronic means (number)	P
	67.	Registered users of e-health electronic means (number)	P
	68.	Registered users of inter-operability electronic means (number)	P
KAI 3.3	69.	SMEs using integrated management informatics systems (number)	P
	70.	SMEs using electronic commerce informatics systems (number)	P
KAI 4.1	71.	Reduction of electric power absorbed from the system (MW)	P
	72.	Reduction of natural gas quantity absorbed from the network (MWh)	P
	73.	Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh)	P
	74.	Reduction of technological losses in the distribution network (%) - electric energy sector - natural gas sector	P
	75.	Increase of the retention capacity of SO ₂ emissions – Large combustion plants (t _{SO₂})	P
	76.	Increase of the retention capacity of No _x emissions – Large combustion plants (t _{No_x})	P
	77.	Increase of the retention capacity of dust – Large combustion plants (t _{dust/KWh})	P
	78.	New jobs created: - women - men	P
KAI 4.2	79.	Installed supplementary energy capacity – RES sector (MW)	P
	80.	New jobs created: - women - men	P
KAI 4.3	81.	New jobs created: - women - men	P



TABLE 8 NEW PROPOSED INDICATORS RESULTING FROM THE SYSTEM LEVEL ANALYSIS (OUTPUT, RESULT AND CONTEXT) TO BE CHECKED THROUGH THE INDIVIDUAL LEVEL ANALYSIS

OUTPUT INDICATORS						
KAI	No.	Indicators	Type		Recommendation	Rationale
KAI 1.1	82.	Investment induced (million euro)	P	Add	Use with AC 300 - SMEs investments, productive sector AC 301 - Large enterprises investments, productive sector	Core indicator
KAI 5.2	83.	Information and publicity materials (number)	P	Add	Use with AC 705 - Communication and publicity	Coverage of KAI interventions
KAI 5.2	84.	Total amount of advisory services received (expertise and advice) (man-days)	P	Add	Use with AC 700 Technical assistance AC 701 - Management and coordination AC 702 - Support for beneficiaries	Coverage of KAI interventions
RESULT INDICATORS						
KAI 1.3	85.	Strategies, studies, analyses, plans implemented (number)	P	Add	Use with AC 307 - Purchase of consulting services	Coverage of KAI interventions
	86.	Productivity increase in companies within the competitiveness poles/ clusters (starting two years after the projects implementation) (%)	P	Add	Use with AC 306 - Business infrastructure AC 308 - Clusters/supply chains	Coverage of KAI interventions
	87.	New jobs created: - men - women (number)	P	Add	Use with AC 306 - Business infrastructure AC 308 - Clusters/supply chains	Coverage of KAI interventions
KAI 3.3	88.	Reduction of administrative and sales costs due to the project implementation (starting two years after the projects implementation) (%)	P	Add	Use with AC 324 - Electronic applications for business management AC 325 - Electronic solutions for businesses	Coverage of KAI interventions
KAI 4.1	89.	Population awareness level (%)	P	Add	Use with AC 705 - Communication and publicity	Coverage of KAI interventions



OUTPUT INDICATORS

KAI	No.	Indicators	Type	Recommendation		Rationale
KAI 5.1 KAI 5.2	90.	Degree of satisfaction of training participants (%)	P	Add	Use with AC 700 Technical assistance AC 701 – Management and coordination AC 702 – Support for beneficiaries	Coverage of KAI interventions

CONTEXT INDICATORS

KAI 1.1	91.	Total investments as % of GDP	P	Add		Coverage socio-economic context
KAI 2.3	92.	SME developing innovation activities (% of total)				Coverage socio-economic context
KAI 2.1 KAI 2.3	93.	Summary innovation index (EIS)				Coverage socio-economic context
KAI 4.1	94.	Energy intensity of economy (kgoe per 1000 EUR)	P	Add		Coverage socio-economic context
KAI 4.2	95.	Percentage of RES in gross electric energy consumption (%)	P	Add		Coverage socio-economic context



3. ANALYSIS OF THE INDIVIDUAL INDICATORS

The analysis of the individual indicators consisted of the examination of the existing input, output and result indicators, **which passed the analysis at system level**. Indicators that were rejected after the analysis of the system were considered inherently flawed so as to make their individual analysis unnecessary. The reasons for their rejection, as well as suggestions for their replacements (where appropriate) were presented in the previous section.

The list of indicators subject to the current individual analysis includes the original programme indicators and supplementary indicators, introduced as an update through the common effort of MA SOP IEC and ACIS-ECU during the implementation so far. As no impact or context indicators are included in the current system, such categories are not covered by the analysis.

This list of output and result indicators was assessed against the four criteria for quality indicators as set out in the ToR, based on the DG Regional Policy Guidelines namely: “relevance”, “sensitivity”, “availability” and “cost”. Each indicator was scored from 1 to 3, for each of the criteria (1 being the lowest, 3 the highest).

Relevance: 1 – little relevance; 2 – partial relevance; 3 – relevant

Sensitivity: 1 – low sensitivity (the indicator has no or very limited response when changes occur in the variable to be measured and can be influenced by a lot of external factors); 2 – partially sensitivity (the indicator responds partially to when changes occur in the variable to be measured and is not significantly influenced by external factors); 3 – sensitive (the indicator fully reflects the changes in the variable to be measured and is not influenced by external factors).

Availability: 1 – no or limited availability (cannot be collected and/or updated); 2 – partial availability (it is difficult to collect/update regularly, due to calculation method, source etc.) 3 – available (does not pose any difficulties for collection/update)

Cost: 1 – high costs (specific studies, surveys at MA/ACIS etc.), 2 – medium costs (specific studies or other costs for beneficiaries), 3 – low cost (no additional costs for collection, other than regular reporting requirements and input into the electronic system)

Scoring interpretation: If an indicator scores 1 to any of the criteria, it is recommended to be removed;

Comments have been made in relation to each of the above issues. The analysis of the individual indicators output and result indicators of SOP IEC can be found in **ANNEX II**.

Recommendations regarding each individual indicator are presented in the following table.

TABLE 9 RECOMMENDATIONS REGARDING INDICATORS, FOLLOWING THE ANALYSIS AT INDIVIDUAL LEVEL

Sectoral Operational Programme IEC					
No. ¹⁵	Indicators	Type	Recommendation		Rationale
OUTPUT INDICATORS					
Priority Axis 1					
<i>KAI 1.1</i>					
PROGRAMME INDICATORS					
1	Projects supporting direct investment to SMEs (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
2	Assisted SMEs - standards implementation (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
3	Assisted SMEs - access to new markets (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
4	Large enterprises assisted (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
<i>KAI 1.2</i>					
PROGRAMME INDICATORS					
5	Guarantee funds and risk capital funds developed – financial instruments	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
<i>KAI 1.3</i>					
PROGRAMME INDICATORS					
6	New business support structures created (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
7	Business support structures developed (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
8	Assisted SMEs – purchase of consulting services (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
SUPPLEMENTARY INDICATORS					
9	Number of studies, analyses, reports, strategies	output	Keep	No changes necessary for increasing relevance, sensitivity,	Passing the individual analysis

¹⁵ Number corresponding to the order in which the indicator was treated in the individual analysis (see Annex II)

Sectoral Operational Programme IEC					
No.15	Indicators	Type	Recommendation		Rationale
OUTPUT INDICATORS					
				availability, cost.	
Priority Axis 2					
<i>KAI 2.1</i>					
PROGRAMME INDICATORS					
10	Projects developed jointly by R&D institutions and enterprises (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
11	R&D projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
12	Assisted SMEs in R&D partnership projects, high scientific level R&D projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
13	Large enterprises assisted in R&D partnership projects, high scientific level R&D projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
SUPPLEMENTARY INDICATORS					
14	Number of specialists from abroad employed	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
15	Number of articles in scientific publications	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
<i>KAI 2.2</i>					
PROGRAMME INDICATORS					
16	R&D projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
17	R&D centres connected to GRID structures (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
18	Innovative structures developed - excellence poles (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis



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Sectoral Operational Programme IEC					
No.15	Indicators	Type	Recommendation		Rationale
OUTPUT INDICATORS					
19	Institutions assisted for increasing administrative capacity (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 2.3.</i>				
	PROGRAMME INDICATORS				
20	R&D projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
21	Assisted SMEs in R&D projects - private R&D infrastructure - technological innovation - young innovative enterprises (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
22	Large enterprises assisted in R&D projects - private R&D infrastructure - technological innovation (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
23	Number of start-ups developed (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
24	Number of spin-offs developed (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	Priority Axis 3				
	<i>KAI 3.1.</i>				
	PROGRAMME INDICATORS				
25	Number of ICT projects – electronic communication infrastructure	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
26	Broadband networks built - electronic communication infrastructure (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
27	SMEs connected to Internet via broadband connections – electronic communication infrastructure (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
28	Public institutions connected to Internet via broadband connections – electronic communication infrastructure (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis

Sectoral Operational Programme IEC					
No.15	Indicators	Type	Recommendation		Rationale
OUTPUT INDICATORS					
29	NGOs connected to Internet via broadband connections – electronic communication infrastructure (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
30	School units/inspectores connected to Internet via broadband connections – electronic communication infrastructure (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 3.2.</i>				
	PROGRAMME INDICATORS				
31	Number of ICT projects - e-government - e-learning - e-health - inter-operability	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
32	Systems for which interoperability is ensured (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 3.3.</i>				
	PROGRAMME INDICATORS				
33	Number of ICT projects - electronic solutions for businesses - electronic applications for business management	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
34	IT systems implemented/ extended – electronic solutions for businesses (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
35	IT systems implemented/ extended – electronic applications for business management	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
36	SMEs using integrated management informatics systems (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
37	SMEs using electronic commerce informatics systems (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	Priority Axis 4				
	<i>KAI 4.1.</i>				
	PROGRAMME INDICATORS				

Sectoral Operational Programme IEC					
No.15	Indicators	Type	Recommendation		Rationale
OUTPUT INDICATORS					
38	Length of transportation network extended / modernised – electric energy sector (km)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
39	Length of transportation network extended / modernised – natural gas sector (km)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
40	Length of transportation network extended / modernised – oil sector (km)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
41	Length of distribution network extended / modernised – electric energy sector (km)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
42	Length of distribution network extended / modernised – natural gas sector (km)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
43	Projects for improving air quality – LCP projects (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
44	SMEs assisted – energy efficiency (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
45	Large enterprises assisted – energy efficiency (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
<i>KAI 4.2.</i>					
PROGRAMME INDICATORS					
46	Projects for capitalization of renewable energy sources (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
47	SMEs assisted – RES sector (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
48	Large enterprises assisted – RES sector (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
<i>KAI 4.3.</i>					

Sectoral Operational Programme IEC					
No.15	Indicators	Type		Recommendation	Rationale
OUTPUT INDICATORS					
	PROGRAMME INDICATORS				
49	Transportation network interconnections (number): - electric energy sector - natural gas sector	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	Priority Axis 5				
	<i>KAI 5.1.</i>				
	PROGRAMME INDICATORS				
50	Meetings of relevant committees and working groups (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
51	Participant training-days (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 5.2.</i>				
	PROGRAMME INDICATORS				
52	Participant training-days (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
53	Communication and promotion events (number)	output	Remove	Replace with <i>"Participants at events organized (number)"</i>	Increased Relevance
54	Mass-media campaigns (number)	output	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis

Sectoral Operational Programme IEC					
No.16	Indicators	Type		Recommendation	Rationale
RESULT INDICATORS					
	Priority Axis 1				
	<i>KAI 1.1</i>				
	SUPPLEMENTARY INDICATORS				
55	New jobs created – SMEs investments in the productive sector: -women - men (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis

¹⁶ Number corresponding to the order in which the indicator was treated in the individual analysis (see Annex II)

Sectoral Operational Programme IEC					
No.16	Indicators	Type	Recommendation		Rationale
RESULT INDICATORS					
56	Certified SMEs – standards implementation (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
57	Turnover increase in assisted SMEs (2 years after the project implementation)	result	Remove		Low sensitivity, reduced availability, relatively high costs
	<i>KAI 1.2</i>				
	PROGRAMME INDICATORS				
58	SMEs assisted through guarantee operations – financial instruments	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
59	SMEs assisted through risk capital funds – financial instruments (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	Priority Axis 2				
	<i>KAI 2.1.</i>				
	PROGRAMME INDICATORS				
60	Jobs created / maintained at the assisted beneficiaries (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
61	Patent applications resulted from R&D partnership projects, high scientific level R&D projects (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 2.2.</i>				
	PROGRAMME INDICATORS				
62	New jobs created (men, women) (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 2.3.</i>				
	PROGRAMME INDICATORS				
63	New jobs created - Men - women (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
64	Patent applications resulted from: - technological innovation projects - young innovative enterprises	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis

Sectoral Operational Programme IEC					
No.16	Indicators	Type	Recommendation		Rationale
RESULT INDICATORS					
	projects (number)				
Priority Axis 3					
	<i>KAI 3.1.</i>				
	PROGRAMME INDICATORS				
65	Additional population that will be connected to broadband networks – electronic communication infrastructure (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 3.2.</i>				
	PROGRAMME INDICATORS				
66	Registered users of e-government electronic means (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
67	Registered users of e-learning electronic means (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
68	Registered users of e-health electronic means (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
69	Registered users of inter-operability electronic means (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
Priority Axis 4					
	<i>KAI 4.1.</i>				
	PROGRAMME INDICATORS				
70	Reduction of electric power absorbed from the system (MW)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
71	Reduction of natural gas quantity absorbed from the network (MWh)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
72	Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
73	Reduction of technological losses	result	Keep	No changes necessary	Passing the individual

Sectoral Operational Programme IEC					
No.16	Indicators	Type		Recommendation	Rationale
RESULT INDICATORS					
	in the distribution network (%) - electric energy sector - natural gas sector			for increasing relevance, sensitivity, availability, cost.	analysis
74	Increase of the retention capacity of SO ₂ emissions – Large combustion plants (t _{SO₂})	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
75	Increase of the retention capacity of Nox emissions – Large combustion plants (t _{Nox})	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
76	Increase of the retention capacity of dust – Large combustion plants (t _{dust} /KWh)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
77	New jobs created: - women - men	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 4.2.</i>				
	PROGRAMME INDICATORS				
78	Installed supplementary energy capacity – RES sector (MW)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
79	New jobs created: - women - men	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	<i>KAI 4.3.</i>				
	PROGRAMME INDICATORS				
80	New jobs created: - women - men	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis
	Priority Axis 5				
	<i>KAI 5.2.</i>				
	PROGRAMME INDICATORS				
81	Website visits (number)	result	Keep	No changes necessary for increasing relevance, sensitivity, availability, cost.	Passing the individual analysis

TABLE 10 NEW PROPOSED INDICATORS

Sectoral Operational Programme IEC					
No.17	Indicators	Type		Recommendation	Rationale
NEW PROPOSED INDICATORS					
OUTPUT INDICATORS					
Priority Axis 1					
	<i>KAI 1.1</i>				
	NEW PROPOSED INDICATORS BASED ON SYSTEM ANALYSIS				
82	Investment induced (million euro)	output	Add	AC 300 - SMEs investments, productive sector AC 301 - Large enterprises investments, productive sector	Core indicator
	<i>KAI 5.2</i>				
	NEW PROPOSED INDICATORS BASED ON SYSTEM ANALYSIS				
88	Information and publicity materials (number)	output	Add	AC 705 - Communication and publicity	Coverage of KAI interventions
	NEW PROPOSED INDICATORS BASED ON INDIVIDUAL ANALYSIS				
91	Participants at events organised (%)	result	Add	AC 705 - Communication and publicity	Increased relevance
90	Total amount of advisory services received (expertise and advice) (man-days)	output	Add	Use with AC 700 Technical assistance AC 701 - Management and coordination AC 702 - Support for beneficiaries	Coverage of KAI interventions

Sectoral Operational Programme IEC					
No.18	Indicators	Type		Recommendation	Rationale
NEW PROPOSED INDICATORS					
RESULT INDICATORS					
	<i>KAI 1.3</i>				
	NEW PROPOSED INDICATORS BASED ON SYSTEM ANALYSIS				
83	Strategies, studies, analyses, plans implemented (number)	result	Add	AC 307 - Purchase of consulting services	Coverage of KAI interventions
84	Productivity increase in companies within the competitiveness poles/ clusters (starting two years after the	result	Add	AC 306 - Business infrastructure AC 308 - Clusters/supply chains	Coverage of KAI interventions

¹⁷ Number corresponding to the order in which the indicator was treated in the individual analysis (see Annex II)

¹⁸ Number corresponding to the order in which the indicator was treated in the individual analysis (see Annex II)

Sectoral Operational Programme IEC					
No.18	Indicators	Type		Recommendation	Rationale
NEW PROPOSED INDICATORS					
RESULT INDICATORS					
	projects implementation) (%)				
85	New jobs created: - men - women (number)	result	Add	AC 306 – Business infrastructure AC 308 - Clusters/supply chains	Coverage of KAI interventions
	<i>KAI 3.3</i>				
NEW PROPOSED INDICATORS BASED ON SYSTEM ANALYSIS					
86	Reduction of administrative and sales costs due to the project implementation (starting two years after the projects implementation) (%)	result	Add	AC 324 - Electronic applications for business management AC 325 - Electronic solutions for businesses	Coverage of KAI interventions
	<i>KAI 5.1.</i>				
NEW PROPOSED INDICATORS BASED ON SYSTEM LEVEL ANALYSIS					
87	Degree of satisfaction of training participants (%)	result	Add	Use with AC 701 – Management and coordination AC 702 – Support for beneficiaries	Coverage of KAI interventions
	<i>KAI 5.2.</i>				
NEW PROPOSED INDICATORS BASED ON SYSTEM LEVEL ANALYSIS					
87	Degree of satisfaction of training participants (%)	result	Add	Use with AC 701 – Management and coordination 702 – Support for beneficiaries	Coverage of KAI interventions
89	Population awareness level (%)	result	Add	AC 705 – Communication and publicity	Coverage of KAI intervention



4. RECOMMENDATIONS

4.1. NEEDS ASSESSMENT

For improved clarity and coherence, it is advisable to have a common approach across OPs in respect to TA indicators, as well as overall clear guidelines.

It is recommended to provide training and instructions/ procedures specifically designed for working with indicators, both for MA and IB staff;

It is advisable to continue the development of SMIS, so as to grant access into the system for beneficiaries for inputting data;

Clear differentiation and treatment between project and programme indicators is also recommended.

4.2. ANALYSIS OF THE INDICATORS SYSTEM

1. It is advisable that **new output and result indicators be introduced to fill the gaps in coverage**. A detailed list is presented in the following tables.
2. Given that the European Commission underlines the utility of context indicators and that the need for this type of indicators has precisely resulted from the analysis performed, it is recommended that **context indicators be introduced and properly defined** for SOP IEC. A list is presented in the following tables.
3. As regards matching the core indicators requested by the EC, it is advisable to follow the **existing supplementary indicators, which should be “empowered” as programme indicators**.
4. Manageability should be improved, by **officially adopting the action categories and increasing the use of the equivalent SMIS function**. Also for manageability reasons, consistency should be observed in defining (especially labelling) indicators.
5. For improved coverage and manageability, it is advisable to replace the existing AC 700 - Technical assistance to better reflect specific interventions under PA6, into five newly created sub-categories of intervention: **AC 701 – Management and coordination; AC 702 – Beneficiary support; AC 703 – Evaluation; AC 704 – ITC; AC 705 – Information and publicity**. This would enable the differentiation between the major types of interventions supported through TA.
6. Partially overlapping indicators should be either removed or combined.
7. All recommendations regarding the removal and addition of new indicators took into account the finding of the balance analysis, envisaging the improvement of balance between output and result indicators within a KAI, on one hand, and between indicators assigned to different Priority Axes/KAIs, on the other hand.

4.3. ANALYSIS OF INDIVIDUAL INDICATORS

Based on the individual analysis, it is advisable to remove a number of indicators, which scored poorly on relevance (1 on the scale from 1 to 3).

The recommendations resulting from the analysis at individual level represent the second step in the indicators assessment, after that done at system level. Together, the combined recommendations have led to the final recommended list of indicators, which can be found in the next sub-section.

4.4. RECOMMENDED LIST OF INDICATORS FOR SOP IEC

The recommended list of indicators for SOP IEC is built based on the findings, conclusions and recommendations of all the previous chapters and aims at bringing improvements both at the level of the system and at the level of individual indicators.

TABLE 11 FINAL RECOMMENDED LIST OF INDICATORS SOP IEC

OUTPUT INDICATORS							
No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
KAI 1.1							
1	*	Projects supporting direct investment to SMEs (number)	No.	300	SME investments, productive sector	Simple	(7)
2	127	Assisted SMEs (number)	No.	302	Standards implementation	Simple	-
				303	Access to new markets		
3	301	Large enterprises assisted (number)	No.	301	Large enterprises investments, productive sector	Simple	-
4	*	Investment induced (million euro)	million euro	300	SMEs investments, productive sector	Simple	(10)
				301	Large enterprises investments, productive sector		
KAI 1.2							
5	344	Financial instruments	No.	344	Guarantee	Simple	-

¹⁹ According to Working Document 7



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OUTPUT INDICATORS

No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
		developed (number)			operations		
				345	Risk capital funds		
KAI 1.3							
6	306	New business support structures created (number)	No.	306	Business infrastructure	Simple	-
7	307	Business support structures developed (number)	No.	306	Business infrastructure	Simple	-
8	127	Assisted SMEs (number)	No.	307	Purchase of consulting services	Simple	-
9	*	Number of studies, analyses, reports, strategies	No.	306	Business infrastructure	Simple	-
				307	Purchase of consulting services		
				308	Clusters/supply chains		
KAI 2.1							
10	*	Projects developed jointly by R&D institutions and enterprises (number)	No.	309	R&D partnership	Simple	(5)
11	*	R&D projects (number)	No.	309	R&D partnership	Simple	(4)
12	127	Assisted SMEs (number)	No.	309	R&D partnership	Simple	-
				310	R&D of high scientific value		
13	301	Large enterprises assisted (number)	No.	309	R&D partnership	Simple	-
				310	R&D of high scientific value		
14	*	Number of specialists from abroad employed	No.	310	R&D of high scientific value	Simple	-
15	*	Number of articles in scientific publications	No.	309	R&D partnership	Simple	-
			No.	310	R&D of high scientific value		
KAI 2.2							
16	*	R&D projects (number)	No.	311	R&D public infrastructure	Simple	(4)



OUTPUT INDICATORS

No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
				314	R&D international networks		
17	311	R&D centres connected to GRID structures (number)	No.	314	R&D international networks	Simple	-
18	322	Innovative structures developed (number)	No.	313	Excellence poles	Simple	-
19	323	Public institutions assisted (number)	No.	315	Administrative capacity	Simple	-

KAI 2.3

20	*	R&D projects (number)	No.	312	Private R&D infrastructure	Simple	-
				316	Innovative start-up		
				317	Innovative spin-off		
				318	Young innovative enterprises		
				333	Technological innovation		
21	127	Assisted SMEs (number)	No.	312	Private R&D infrastructure	Simple	-
				318	Young innovative enterprises		
				333	Technological innovation		
22	301	Large enterprises assisted (number)	No.	312	Private R&D infrastructure	Simple	-
				333	Technological innovation		
23	324	Number of start-ups supported	No.	316	Innovative start-ups	Simple	(8)
24	325	Spin-offs developed (number)	No.	317	Innovative spin-offs	Simple	-

KAI 3.1

25	*	ICT projects (number)	No.	323	Inter-operability	Simple	It contributes to
				324	Electronic		



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OUTPUT INDICATORS

No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
					applications for business management		reporting the core indicator (11).
				325	Electronic solutions for businesses		
26	328	Broadband networks built (number)	No.	319	Electronic communication infrastructure	Simple	-
27	330	SMEs connected to broadband internet (number)	No.	319	Electronic communication infrastructure	Simple	-
28	326	Public institutions connected to broadband internet (number)	No	319	Electronic communication infrastructure	Simple	-
29	331	NGOs connected to broadband internet (number)	No	319	Electronic communication infrastructure	Simple	-
30	332	School units/ inspectorates connected to broadband internet (number)	No	319	Electronic communication infrastructure	Simple	-
KAI 3.2							
31	*	ICT projects (number)	No.	320	E-government	Simple	-
				321	E-learning		
				322	E-health		
				323	Inter-operability		
32	*	Systems for which interoperability is ensured (number)	No.	323	Inter-operability	Simple	-
KAI 3.3							
33	*	ICT projects (number)	No.	324	Electronic applications for business management	Simple	It contributes to reporting the core indicator (11)
				325	Electronic solutions for businesses		
34	335	IT systems implemented/ extended (number)	No.	325	Electronic solutions for businesses	Simple	-
				324	Electronic applications for		

OUTPUT INDICATORS							
No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
					business management		
35	334	SMEs using integrated management informatics systems (number)	No.	324	Electronic applications for business management	Simple	-
36	333	SMEs using electronic commerce informatics systems (number)	No.	325	Electronic solutions for businesses	Simple	-
KAI 4.1							
37	317	Length of transportation network extended/ modernised (km)	No.	326	Electric energy sector	Simple	-
38	317	Length of transportation network extended/ modernised (km)	No.	327	Natural gas sector	Simple	
39	317	Length of transportation network extended/ modernised (km)	No.	328	Oil sector	Simple	-
40	316	Length of distribution network extended/ modernised (km)	No.	326	Electric energy sector	Simple	-
41	316	Length of distribution network extended/ modernised (km)	No.	327	Natural gas sector	Simple	-
42	*	Projects for improving air quality (number)	No.	331	Large combustion plants	Simple	(21)
43	127	Assisted SMEs (number)	No.	330	Energy efficiency	Simple	-
44	301	Large enterprises assisted (number)	No.	330	Energy efficiency	Simple	-
KAI 4.2							
45	*	Number of projects (renewable energy)	No.	329	RES sector	Simple	(23)
46	127	Assisted SMEs (number)	No.	329	RES sector	Simple	-
47	301	Large enterprises assisted (number)	No.	329	RES sector	Simple	-
48	319	Transportation network interconnections (number)	No.	326	Electric energy sector	Simple	-
				327	Natural gas sector		
KAI 5.1							
49	703	Meetings of relevant committees and working	No.	701	Management and	Simple	-

OUTPUT INDICATORS

No.	Code SMIS	Indicator	UM	AC code	Action Category	Type	Core indicator ¹⁹
		groups (number)			coordination		
50	706	Participant training-days (number)	No.	701	Management and coordination	Simple	-
KAI 5.2							
51	706	Participant training-days	No.	701	Management and coordination	Simple	-
52	704	Participants at events organised (number)	No.	705	Communication and publicity	Simple	-
53	710	Mass-media campaigns (number)	No.	705	Communication and publicity	Simple	-
54	709	Information and publicity materials (number of copies)	No.	705	Communication and publicity	Simple	-

RESULT INDICATORS

Nr. crt.	Cod SMIS	Indicator	UM	Cod SMIS	Action Category	Type	Core indicator ²⁰
KAI 1.1							
55	120	New jobs created: - men - women (number)	No.	300	SME investments, productive sector	Simple	(9)
56	302	Certified SMEs (number)	No.	302	Standards implementation	Simple	-
57	*	Turnover increase in assisted SMEs (2 years after the project implementation)	%	300	SME investments, productive sector	Simple	-
				302	Standards implementation		
				303	Access to new markets		
KAI 1.2							
58	127	Assisted SMEs (number)	No.	344	Guarantee operations	Simple	-
				345	Risk capital funds		
KAI 1.3							
59	*	Strategies, studies, analyses, plans implemented (number)	No.	307	Purchase of consulting services	Simple	-

²⁰ Cf. Documentului de lucru nr.7

RESULT INDICATORS							
Nr. crt.	Cod SMIS	Indicator	UM	Cod SMIS	Action Category	Type	Core indicator ²⁰
60	*	Productivity increase in companies within the competitiveness poles/ clusters (starting two years after the projects implementation) (%)	%	306	AC- Business infrastructure	Simple	-
				308	Clusters/supply chains		
61	*	New jobs created: - men - women (number)	No.	306	AC- Business infrastructure	Simple	-
				308	Clusters/supply chains		
KAI 2.1							
62	120	New jobs created - men - women (number)	No.	309	R&D partnership	Simple	(6)
				310	R&D of high scientific value		
63	308	Patent applications (number)	No.	309	R&D partnership	Simple	-
				310	R&D of high scientific value		
KAI 2.2							
64	120	New jobs created - men - women (number)	No.	314	R&D international networks	Simple	(6)
KAI 2.3							
65	120	New jobs created - men - women (number)	No.	312	R&D private infrastructure	Simple	(6)
				316	Innovative start-ups		
				317	Innovative spin-offs		
				318	Young innovative enterprises		
				333	Technological innovation		
66	308	Patent applications (number)	No.	318	Young innovative enterprises	Simple	-
				333	Technological innovation		
KAI 3.1							
67	329	Additional population covered by broadband access (number)	No.	319	Electronic communication infrastructure	Simple	-
KAI 3.2							



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RESULT INDICATORS

Nr. crt.	Cod SMIS	Indicator	UM	Cod SMIS	Action Category	Type	Core indicator ²⁰
68	313	Registered users of electronic means (number)	No.	320	E-government	Simple	-
				321	E-learning		
				322	E-health		
				323	Inter-operability		
KAI 3.3							
69	*	Reduction of administrative and sales costs due to the project implementation (starting two years after the projects implementation) (%)	%	324	Electronic applications for business management	Simple	
				325	Electronic solutions for businesses		
KAI 4.1							
70	337	Reduction of electric power absorbed from the system (MW)	MW	330	Energy efficiency	Simple	-
71	338	Reduction of natural gas quantity absorbed from the network (MWh)	MWh	330	Energy efficiency	Simple	-
72	339	Reduction of steam / hot water quantity, exclusively for industrial purposes (MWh)	MWh	330	Energy efficiency	Simple	-
73	318	Reduction of technological losses in the distribution network (%)	%	326	Electric energy sector	Simple	-
				327	Natural gas sector		
74	340	Increase of the retention capacity of SO ₂ emissions (t _{SO₂})	t _{SO₂}	331	Large combustion plants	Simple	-
75	341	Increase of the retention capacity of NO _x emissions (t _{NO_x})	t _{NO_x}	331	Large combustion plants	Simple	-
76	342	Increase of the retention capacity of dust (t _{dust/KWh})	t _{dust/KWh}	331	Large combustion plants	Simple	-
77	120	New jobs created: - men - women (number)	No.	326	Electric energy sector	Simple	-
				327	Natural gas sector		
				328	Oil sector		
KAI 4.2							
78	336	Installed supplementary energy capacity (MW)	MW	329	RES sector	Simple	-
79	120	New jobs created: - men - women (number)	No.	329	RES sector	Simple	-



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RESULT INDICATORS

Nr. crt.	Cod SMIS	Indicator	UM	Cod SMIS	Action Category	Type	Core indicator ²⁰
KAI 4.3							
80	120	New jobs created: - men - women (number)	No.	326	Electric energy sector	Simple	-
				327	Natural gas sector		
KAI 5.1							
81	*	Degree of satisfaction of training participants (%)	%	701	Management and coordination	Simple	-
				702	Support for beneficiaries		
KAI 5.2							
82	711	Website visits (number)	No.	705	Communication and publicity	Simple	-
83	*	Degree of satisfaction of training participants (%)	%	701	Management and coordination	Simple	-
				702	Support for beneficiaries		
84	*	Total amount of advisory services received (expertise and advice) (man-days)	Man-days	700	Technical assistance	Simple	-
				701	Management and coordination		
				702	Support for beneficiaries		
85	*	Population awareness level (%)	%	705	Communication and publicity	Simple	-

Impact Indicators

Impact indicators	Correspondence with SOP IEC objectives	Correspondence with PA level objectives
Average annual growth of GDP per employee	SOP IEC global objective	<i>Not applicable</i>
Productivity increase (average)	SOP IEC global objective	<i>Not applicable</i>
Increase of SME share of GDP	SOP IEC specific objectives 1 and 2	Objectives of Priority Axis 1
Increase of gross domestic R&D expenditures (GERD) share of GDP	SOP IEC specific objective 3	Objectives of Priority Axis 2
Broadband penetration rate	SOP IEC specific objective 4	Objectives of Priority Axis 3
Primary energy intensity	SOP IEC specific objective 5	Objectives of Priority Axis 4
Electricity produced from renewable energy resources	SOP IEC specific objective 5	Objectives of Priority Axis 4