



Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020

Part II – Thematic Objective 2, 7, 8, 9, 10, 11



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Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020

Part II – Thematic Objective 2, 7, 8, 9, 10, 11

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FOREWORD

This is the second part of the study 'Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020'.

The study assesses the possibility of expanding the current list of common output indicators and the feasibility of developing a list of common direct result indicators for post-2020 ERDF (European Regional Development Fund) and CF (Cohesion Fund) interventions, amounting to Eur 350 billion for 355 operational programmes in the 2014-2020 period. This study builds on the current programming period and is based on lessons learned from other programming experiences within and beyond the European Structural and Investment (ESI) Funds framework.

This part of the study proposes a list of candidate common output and direct result indicators on TO (thematic objective) 2 'Enhancing access to, and use and quality of information and communication technologies (ICT)', TO 7 'Promoting sustainable transport and removing bottlenecks in key network infrastructures'; TO 8 'Promoting sustainable and quality employment and supporting labour mobility', TO 9 'Promoting social inclusion, combating poverty and discrimination', TO 10 'Investing in education, training and lifelong learning' and TO 11 'Improving the efficiency of public administration'.

These proposals are based on literature review, analysis of the use of 2014-2020 common and programme-specific output indicators and consultation with administrative bodies and Managing Authorities. These represent a sample of programmes, selected considering the EU allocation for each thematic objective.

ACRONYMS

AIR: Annual Implementation Report

AWU: Annual Working Unit

CF: Cohesion Fund

CF regulation: Regulation (EU) No 1300/2013 of the European Parliament and of the Council²

COI: Common output indicators as defined in ERDF and CF regulations

COSME: Europe's programme for small and medium-sized enterprises

CPR: Common Provisions Regulation (Regulation (EU) No 1303/2013 of the European Parliament and of the Council³)

DG: Directorate General

EAFRD: European Agricultural Fund for Rural Development

EC: European Commission

ECA: European Court of Auditors

EEA: European Economic Area

EIB: European Investment Bank

EMFF: European Maritime and Fisheries Fund

ERDF regulation: Regulation (EU) No 1301/2013 of the European Parliament and of the Council⁴

ERDF: European Regional Development Fund

ESF regulation: Regulation (EU) No 1304/2013 of the European Parliament and of the Council⁵

² Regulation (EU) No 1300/2013 of the European Parliament and of the Council of 17 December 2013 on the Cohesion Fund and repealing Council Regulation (EC) No 1084/2006.

³ Regulation (EU) No 1303/2013 of the European Parliament and of the Council of 17 December 2013 laying down common provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund, the European Agricultural Fund for Rural Development and the European Maritime and Fisheries Fund and laying down general provisions on the European Regional Development Fund, the European Social Fund, the Cohesion Fund and the European Maritime and Fisheries Fund and repealing Council Regulation (EC) No 1083/2006 (OJ L 347, 20.12.2013, p.320).

⁴ Regulation (EU) No 1301/2013 of the European Parliament and of the Council of 17 December 2013 on the European Regional Development Fund and on specific provisions concerning the Investment for growth and jobs goal and repealing Regulation (EC) No 1080/2006 (OJ L 347, 20.12.2013, p. 289).

ESF: European Social Fund

ESI Fund: European Structural and Investment Fund

ETC: European Territorial Cooperation

ETC regulation: Regulation (EU) No 1299/2013 of the European Parliament and of the Council⁶

EU: European Union

EURF: EU International Cooperation and Development Results Framework

FTE: Full time equivalent employees

GHG: Greenhouse gases

IBI: Innovation-based incubators

ICT: Information and communication technology

IP: Investment Priority

ISCED: International Standard Classification of Education

ITS: Intelligent Transport System

MA: Managing Authority

MS: European Union Member State

NGO: Non-governmental organisation

OECD: Organisation for Economic Co-operation and Development

OP: Operational programmes

PforR: The World Bank Initiative Programme for Results

RACER: It is an acronym used by the Better Regulation Guidelines to identify 'good' indicators. R (relevant), the indicator ensures appropriate thematic coverage and a direct and close link to the objective it is measuring and monitoring; A (accepted) - when it is understood by those in charge of data collection, C (credible) - when it is unambiguous and easy to interpret, E (easy to monitor) - when data collection is feasible in terms of costs and time, R (robust) - when it is clearly defined and not subject to manipulation.

⁵ Regulation (EU) No 1304/2013 of the European Parliament and of the Council of 17 December 2013 on the on the European Social Fund and repealing Council Regulation (EC) No 1081/2006.

⁶ Regulation (EU) No 1299/2013 of the European Parliament and of the Council of 17 December 2013 on specific provisions for the support from the European Regional Development Fund to the European territorial cooperation goal (OJ L 347, 20.12.2013, p. 259).

R&D: Research and development

SME: Small and medium-sized enterprises

TO: Thematic Objective

VET: Vocational Education and Training

WHO: World Health Organisation

YEI: Youth employment initiative

GLOSSARY

Common indicator: an indicator with agreed definition and measurement unit to be used when relevant in Operational Programmes, permitting aggregation to the national and EU level. 2014-2020 CF and ERDF regulations define common output indicators.

Direct result indicator: matches the direct effects (immediate and short-term effects) of the intervention for the direct addressees. Direct results are project results, i.e. the direct benefit and outcome of programme interventions strictly related to (or derived from) the use of project (programme) outputs. These results, for instance, refer to the performance of beneficiaries, investments triggered, increased access to services. Direct result indicators are aggregated at programme level from the project level. There is a baseline value that may or may not be 0.

Intervention field refers to the type of ERDF and CF programme expenditure and is defined according to Annex I of EU (European Union) Commission Implementing Regulation 215/2014. Codes of intervention fields 1-101 apply to ERDF / CF operational programmes, whereas codes 102-120 apply to the ESF. Codes 121-123 relate to technical assistance and are excluded from the study.

Input indicator: measures input, such as financial indicators on EU budget, National budget, and Total budget (the sum of EU and National budgets).

Investment priority: sets out detailed objectives and forms the basis for defining specific objectives within operational programmes based on the needs and characteristics of the programme area. In the 2014-2020 framework, they are defined in Article 4 of CF regulation and Article 5 of ERDF regulation.

Operation: type of action financed by the programme, using programme inputs, to produce outputs contributing to the change (result).

Operational programmes: for this study, these are programmes financed by ERDF and CF.

Output indicator: relates to the specific deliverables of the intervention. It measures what is produced or bought by the programme expenditure and investments through the projects. It is measured at project level and then aggregated at programme level and has no baseline value.

Process indicator: describes a programme implementation process with information on the number and characteristics of beneficiaries, forms of finance, type of support and number of projects.

Programme-specific indicator: an indicator that can be used by operational programmes to complement the list of common indicators.

SME: means a micro, small or medium-sized enterprise as defined in Commission Recommendation 2003/361/EC (1).

Specific objective: reflects the desired change that the programme should bring about and relates to the specificities of the programme area. As defined in EU regulation 1303/2013, it *means the result to which an Investment priority or Union priority contributes in a specific national or regional context through actions or measures undertaken within such a priority*. Specific objectives reflect the operational objectives to be supported in the operational programmes.

Thematic objectives: are further detailed in the introduction to this report and indicate the common EU objectives. Within the 2014-2020 regulatory framework they are listed in article 9 of the Common Provision Regulation (CPR). For the scope of this study, ERDF interventions can refer to all TOs, while CF interventions relate to TOs 4, 5, 6, 7 and 11.

INTRODUCTION

In the 2014-2020 programming period, ESI funds support 11 thematic objectives:

1. Strengthening research, technological development and innovation;
2. Enhancing access to, and use and quality of information and communication technologies (ICT);
3. Enhancing the competitiveness of small and medium-sized enterprises (SMEs);
4. Supporting the shift towards a low-carbon economy in all sectors;
5. Promoting climate change adaptation, risk prevention and management;
6. Preserving and protecting the environment and promoting resource efficiency;
7. Promoting sustainable transport and removing bottlenecks in key network infrastructures;
8. Promoting sustainable and quality employment and supporting labour mobility;
9. Promoting social inclusion, combating poverty and any discrimination;
10. Investing in education, training and vocational training for skills and lifelong learning;
11. Enhancing institutional capacity of public authorities and stakeholders and efficient public administration.

This report concentrates on thematic objective (TO) 2, 7, 8, 9, 10 and 11.

The conceptual framework and the methodological approach for the assessment of indicator quality and the identification of post-2020 proposals are presented in section 1 and section 2 of Part I of the study.

1. CANDIDATE POST-2020 TO 2 COMMON INDICATORS

1.1. Budget allocation and investment priorities

Thematic Objective 2 supports investments in information and communication technology. According to EC Cohesion data⁷, the total budget planned for TO 2 is around 20.9 billion euro, of which 91.4% is covered by ERDF (national and EU contribution) and 8.6% by EAFRD (national and EU contribution). Of the 19 billion euro covered by ERDF, 70% is the EU amount and 30% is the national amount. TO 2 represents 7% of the total (EU and national) ERDF budget.

The analysis of investment priorities shows the main purposes of the TO 2 interventions and is useful in the light of the identification of the direct results. TO 2 is split into three investment priorities, exclusively relevant for ERDF:

- IP 2a extending broadband deployment and the roll-out of high-speed networks and supporting the adoption of emerging technologies and networks for the digital economy;
- IP 2b developing ICT products and services, e-commerce, and enhancing demand for ICT;
- IP 2c strengthening ICT applications for e-government, e-learning, e-inclusion, e-culture and e-health.

⁷ Data downloaded 19 April 2018 from the open cohesion data platform.

1.2. Gap analysis

The following table shows the use of 2014-2020 common output indicators at IP level.

Table 1 Use of output indicators – TO 2 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
2a	94	65	159	41%
2b	48	137	185	74%
2c	345	6	351	2%
Total	487	208	695	30%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020⁸

The 2014-2020 common output indicators are more frequently used for IP 2b and almost not used for IP 2c, which counts more than 50% of the total number of TO 2 programme output indicators (common and programme-specific), ETC not included.

Table 2 Focus on common output indicators – TO 2 (ETC not included)

Common indicator	IP 2a	IP 2b	IP 2c	Total	Type of indicator based on the conceptual framework of the study
CO01	2	44	1	47	Process
CO02	1	28	1	30	Process
CO03		8		8	Process
CO04		16	1	17	Process
CO05	1	12		13	Process
CO06	1	3		4	Direct result
CO07	1	1		2	Direct result
CO08		17		17	Direct result
CO10	58			58	Output
CO28		3		3	Process
CO29		4		4	Process
CO36			3	3	Direct result ⁹
CO37	1	1		2	Output (can be also interpreted as a direct result)
Total	65	137	6	208	/

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020¹⁰

Overall, across the IPs, the selected common output indicators measure either direct results or process rather than actual outputs.

⁸ Data source refers to October 2017. The data source is the same for all the TOs.

⁹ The indicator could be interpreted as an output indicator if referring to the increased capacity of providing health care services.

¹⁰ Idem.

Investment priority 2a

The selected common output indicators measure direct results (i.e. private investment matching public support), outputs (e.g. additional households with broadband access of at least 30Mbps) and process (i.e. enterprises supported). The most frequently used indicator is CO10 'Additional households with broadband access of at least 30 Mbps'.

Investment priority 2b

Common output indicators concentrate on measuring either direct results or process rather than actual outputs. However, in this case, the most frequently used indicators are the indicators CO01 'Number of enterprises receiving support', CO02 'Number of enterprises receiving grants'. As a matter of fact, IP 2b regards the development of ICT products and services, e-commerce, and enhancing demand for ICT.

Investment priority 2c

Common output indicators are formulated either as direct results or as process indicators.

1.3. Consultation findings

2014-2020 common indicators

MA consultation identified potential issues in the current indicator system based on the main assessment criteria (in particular RACER criteria). The following table shows the percentage of consulted MAs saying respectively in the columns (from left to right) that:

- the indicator covers the main type of intervention,
- the definition of the indicator has been challenging,
- data collection has been difficult,
- measurement costs are higher than for the other indicators.

The last column shows the number of OPs (operational programmes) consulted.

Table 3 MA consultation - Interviewees answering 'yes' and OPs consulted¹¹

Indicator	Coverage of the type of intervention	Difficult definition	Difficult data collection	Higher measurement costs	No. of OPs consulted
CO10	70%	17%	25%	25%	14

Source: Own elaboration of MA consultation.

¹¹ Questions refer to the answers given by the MAs consulted for the indicators in the table regardless the TO and IP. The table records the 'yes' answers to: the capacity of the indicator to cover the main programme types of intervention; the existence of difficulties with definition and data collection; the presence of higher measurement costs compared with other indicators. The same approach is valid for the following tables on the 2014-2020 common output indicators. Section 8.4 of Part I of the study contains the templates of MA consultation and section 8.5 illustrates the findings on 2014-2020 common output indicators.

For CO10, the only issue that emerges from the consultation relates to the definition of 'households', which was not always clear and easy to use.

Programme-specific output indicators

The consultation has analysed a sample of programme-specific output indicators from the consulted programmes. The analysis builds on a sample of 12 programmes using IP 2a, 9 IP 2b, 19 IP 2c. Even if officially classified as output indicators, they have been divided into three groups, when relevant, following the conceptual framework of this study: process, output and direct result indicators.

Investment priority 2a

Programme-specific output indicators capture real outputs and measure: 'solutions implemented for the roll-out', 'number of connection points created' and 'housing units / buildings with broadband access (30 or 100 Mbps)', 'additional companies with broadband connection', 'additional population with broadband connection'.

Investment priority 2b

Most of the programme-specific output indicators capture real outputs and measure either 'ICT applications' or 'Number of platforms / areas equipped for Wi-Fi use / development of ICT solutions', 'Number of ICT applications introduced by the enterprises receiving support', 'Solutions implemented for the reuse of public sector information', 'Local communities involved in the network of activities promoting more effective, safer and responsible use of the Internet', 'Innovative products and services supported', 'Additional businesses taking up broadband with speeds of at least 30Mbps'. Some of the programme-specific output indicators also measure results such as 'Additional businesses taking up broadband with speeds of at least 30Mbps' and 'Companies impacted by awareness-raising activities'.

Investment priority 2c

IP 2c indicators are of three types: some are process indicators, some capture real outputs, others direct results.

Programme-specific output indicators with a process focus measure the number of projects / interventions (. Programme-specific output indicators capturing outputs measure data centres, systems and platforms created, applications, information and education campaigns, services. Programme-specific output indicators capturing direct results encompass: 'population benefiting from digital services of chronic pathologies management' and 'users that have access to or are covered by the eGovernment applications / services'.

Draft proposal of direct result indicators

The consultation has interviewed MAs to identify potential candidate direct result indicators based on a preliminary list provided. The consultation proposed the following direct result indicators: 'Enterprises interacting online with supported public authorities / public authorities participating at the project before and after the project', 'Increase in standard fixed broadband coverage/availability in the area covered by the project', 'Individuals interacting online with supported public authorities / public authorities participating at the project before and after the project', 'Services provided by the supported public authorities / public authorities participating at the project online', 'Supported Enterprises with High levels of Digital Intensity', 'Supported enterprises with increased electronic sales'.

Among all the indicators proposed the indicator ‘Increase in standard fixed broadband coverage/availability in the area covered by the project’ is the most relevant. This indicator can be reformulated to measure broadband coverage for enterprises and households. Overall project reporting is the most popular source of monitoring. When indicators refer to the use of outputs (e.g. services), the appropriate time of monitoring is one year after project completion, in the other cases project completion.

Table 4 MA consultation on a preliminary list of direct result indicators¹²

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	No. of OPs consulted
Enterprises interacting online with supported public authorities / public authorities participating at the project before and after the project	29%	Project reporting (80%)	1 year after completion (67%)	29%	22
Increase in standard fixed broadband coverage/availability in the area covered by the project	58%	Project reporting (70%)	Project completion (78%)	75%	21
Individuals interacting online with supported public authorities	41%	Project reporting (57%)	1 year after completion (63%)	38%	22
Services provided by the supported public authorities	47%	Project reporting (88%)	Project completion (88%)	63%	22
Supported Enterprises with High levels of Digital Intensity	24%	Project reporting (80%)	1 year after completion (60%)	0%	22
Supported enterprises with increased electronic sales	39%	Project reporting (57%)	1 year after completion (100%)	50%	22

Source: Own elaborations of MA consultation.

Moreover, consulted MAs have suggested *inter alia* the following direct result indicators:

- Fixed broadband subscriptions of at least 100 Mbps,
- Households using 100 Mbps and faster broadband internet connection,
- Number of people who have improved their digital skills.

¹² ‘Relevance’: percent of interviewed programmes who think the indicator covers the result of the programme interventions; ‘Source of monitoring’: the preferred source of monitoring; ‘Time of monitoring’: the preferred timing; ‘Already monitored’: the percent of interviewed programmes who already use this or a similar indicator; No. of OPs consulted: the number of programmes consulted for each indicator. All these notes apply to all the similar tables in the report.

1.4. Allocation of planned resources

When analysing the potential for new output indicators, it is worthwhile looking at activities within OPs.

Table 5 shows the most frequently used intervention fields of TO 2. ETC programmes and priority axes with more than one TO have not been included.

Table 5 Intervention fields of TO 2, ETC not included

Intervention field	Code of the intervention field	Share of the EU amount of TO 2
e-Government services and applications (including e-Procurement, ICT measures supporting the reform of public administration, cyber-security, trust and privacy measures, e-Justice and e-Democracy)	078	25%
ICT: High-speed broadband network (access/local loop; >= 30 Mbps)	046	24%
ICT: Very high-speed broadband network (access/local loop; >= 100 Mbps)	047	12%
e-Inclusion, e-Accessibility, e-Learning and e-Education services and applications, digital literacy	080	7%
ICT solutions addressing the healthy active ageing challenge and e-Health services and applications (including e-Care and ambient assisted living)	081	7%
Access to public sector information (including open data e-Culture, digital libraries, e-Content and e-Tourism)	079	7%
ICT Services and applications for SMEs (including e-Commerce, e-Business and networked business processes), living labs, web entrepreneurs and ICT start-ups)	082	6%
ICT: Other types of ICT infrastructure/large-scale computer resources/equipment (including e-infrastructure, data centres and sensors; also where embedded in other infrastructure such as research facilities, environmental and social infrastructure)	048	5%
ICT: Backbone/backhaul network	045	3%
Total of the intervention fields		96%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020¹³.

- Most of TO 2 resources concentrate on e-Government services and applications, and the development of broadband network.
- The intervention fields with an intermediate contribution (7% of the total budget) regard e-Inclusion, e-Accessibility, e-Learning and e-Education services, digital literacy, ICT solutions addressing the healthy active ageing challenge and e-Health services and applications and access to public sector information.
- The intervention fields with lower share (between 3% and 6% of the total EU amount) concern ICT services and applications for SMEs and other ICT networks.

¹³ <https://cohesiondata.ec.europa.eu/EU-Level/ESIF-2014-2020-categorisation-ERDF-ESF-CF/9fpg-67a4>.

1.5. Literature review

EU level

The literature review has focused on the main references at EU level: EU Digital Agenda¹⁴, the Digital Single Market Mid-term Review, the European Digital Progress Report and the Digital Economy and Society Index¹⁵. The documents contain more than 30 relevant indicators on the European digital performance and the evolution of the EU Member States across five main dimensions: Connectivity, Human Capital, Use of Internet, Integration of Digital Technology, Digital Public Services. The objective of reviewing the above-mentioned documents was to find existing that could be used as programme direct result indicators.

Moreover, thematic studies have been examined to collect examples on the monitoring and evaluation of policies in the digital economy¹⁶.

ECA reports

The special report n.9 of 2011 (ECA, 2011) assessed the projects and identified a typical list of output, result and impact indicators for the projects:

- Output indicators refer to the number of servers, software installed, etc.,
- Result indicators to time savings, increased efficiency, higher service quality, cost reduction,
- Impact indicators regard higher competitiveness, job creation, more investments, etc.

International sources (World Bank)

Two lists of World Bank indicators have been examined: core sectors indicators and World Bank Group corporate scorecards. (World Bank, 2013, 2017). The list of World Bank core indicators allows identifying inspiring inputs for the definition of new indicators for ICT sector.

- Electronic transactions of public services (%),
- Average processing time for public services (hours),
- User perception of quality of public services (%),
- Costs to user for public services (US\$),
- Ratio of public services government revenues over costs (%),
- ICT employment (number of people),
- ICT revenue (US\$),
- Number of manpower trained under the project (number of people),
- Access to internet services (number of subscribers per 100 people),
- Retail price of internet services (per Mbit/s per Month, in US\$),
- Length of fibre optic network built (km).

¹⁴ European Commission (2014c).

¹⁵ European Commission (2017e, f).

¹⁶ European Commission (2017g) and Kotarba (2017).

1.6. Candidate indicators for the post-2020 period

The proposed candidate indicators encompass input, process, output and direct result indicators. Input indicators are financial indicators measuring EU, national or total (EU + national) contributions in euros, including the total EU resources invested. As in 2014-2020 period, these indicators can be available as allocation (planned amount), decided amount based on project selection and declared expenditure. Intervention fields of the categories of interventions detail these indicators.

A. Process indicators

Four groups of process indicators are proposed as in the first part of the study on TO1, 3, 4, 5 and 6. The new indicator P.17 is fully described in the fiche in Annex 7.1 of this report. The indicators are described in Part I of the study.

Table 6 Proposed process indicators

Type	Process indicator (measurement unit)	Continuity with 2014-2020	TO (mainly)
Type of beneficiaries	P.1 Enterprises receiving support (number)	Refined (CO01)	2, 7, 8, 9, 10, 11
	P.2 NGOs receiving support (number)	New	2, 7, 8, 9, 10, 11
	P.3 New enterprises receiving support (number)	Existing (CO05)	2, 7, 8, 9, 10, 11
	P.4 Research institutions receiving support (number)	New (based on programme-specific indicators, CO26, which implicitly refers to research institutions)	2, 7, 8, 9, 10, 11
	P.5 Local public authorities (number)	New (based on programme-specific indicator)	2, 7, 8, 9, 10, 11
	P.6 Sub-national public authorities (number)		2, 7, 8, 9, 10, 11
	P.7 National public authorities (number)		2, 7, 8, 9, 10, 11
		P.17 Educational institutions receiving support (number)	New (based on programme-specific indicators)
Characteristics of beneficiaries	P.8 Micro enterprises receiving support (number)	New (based on programme-specific indicator)	2, 7, 8, 9, 10, 11
	P.9 Small enterprises receiving support (number)		2, 7, 8, 9, 10, 11
	P.10 Medium enterprises receiving support (number)		2, 7, 8, 9, 10, 11
	P.11 Large enterprises receiving support (number)		2, 7, 8, 9, 10, 11

Type	Process indicator (measurement unit)	Continuity with 2014-2020	TO (mainly)
Form of finance and type of support	P.12 Social enterprises receiving support (number)	New (programme-specific indicator)	2, 7, 8, 9, 10, 11
	P.13 Enterprises supported with grants (number)	Existing (CO02)	2, 7, 8, 9, 10, 11
	P.14 Enterprises supported with financial instruments (number)	Slightly refined in the title based on CO03	2, 7, 8, 9, 10, 11
	P.15 Enterprises receiving non-financial support	Existing (CO04)	2, 7, 8, 9, 10, 11
Projects	P.16 Number of projects with reference to the IP (e.g. P.16.IPx, P.16.Ipy, etc.)	New (this type of information is usually available for MAs)	2, 7, 8, 9, 10, 11

B. Output indicators

Gaps identified: the only output indicator covers broadband.

Key outputs

- Outputs related to broadband deployment (IP 2a).
- Developed applications and services (IP 2b).
- Improved applications for e-services (IP 2c).

Proposed output indicators

- *Broadband deployment outputs.* Interventions can support extending broadband deployment and the roll-out of high-speed networks and supporting the adoption of emerging technologies and networks for the digital economy. Most of the activities should therefore focus on the improvement of the connectivity in areas, where high speed internet connection is not available today. Because of the increased demand not only connection speed of 30 Mbps but also higher speed of at least 100 Mbps could be supported. As a part of the activities, education and training activities could be supported to improve the adoption of emerging technologies.
- *Developed applications and services.* From the present experience, most of the activities should focus on providing better conditions for new private applications and services development such as data centre development. Important part of new services development is also the support for open data. Output indicators refer to new applications, technological platforms, data centres.
- *Improved applications for e-services.* The investment priority 2c should support strengthening of ICT applications for e-government, e-learning, e-inclusion, e-culture and e-health. The activities should therefore focus on new application development as well as on improvement of security and safety of the user data and interoperability of all developed application.

Table 7 shows the list of proposed output indicators, addressing the gaps highlighted in the previous sections based on intervention fields and investment priorities relevant for TO 2. Each indicator is given a number following the order of the indicators included in Part I of the study regarding the other TOs. Existing and refined indicators are presented first.

Table 7 Proposed output indicators – TO 2

Output indicator (measurement unit)	Continuity with 2014-2020	Intervention field	Investment priority
O.42 Additional households with broadband access of at least 100 Mbps	Existing and refined (CO10)	045, 046, 047	ERDF: 2a
O.56 Additional enterprises with broadband access of at least 100 Mbps	Existing and refined (CO10)	045, 046, 047	ERDF: 2a
O.36 New or upgraded public access points connected to internet	New	046, 047	ERDF: 2a

Output indicator (measurement unit)	Continuity with 2014-2020	Intervention field	Investment priority
O.37 Number of training programmes supporting safe usage of Internet (including e-services)	New	078	ERDF: 2a
O.38 Number of new or upgraded data centres	New	048	ERDF: 2b
O.39 Number of new applications using open data	New	078, 079, 082	ERDF: 2b
O.40 Number of technological platforms created for collaborative innovation and training	New	046, 047, 048, 082	ERDF: 2b
O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)	New	078, 079, 080, 081	ERDF: 2c

C. Direct result indicators

Gaps identified: lack of indicators measuring direct results.

Key direct results

- Improvement and increase of broadband coverage (IP 2a).
- Higher level of ICT use in the supported enterprises (IP 2b).
- Increased online interaction and communication with public authorities (IP 2c).

Proposed direct result indicators

- *Indicators on broadband coverage (IP 2a).* These are based on a refinement of CO10 which refers to 30Mbps. The two indicators measure the number of households and enterprises subscribing a contract with broadband access of at least 100Mbps. 100Mbps seems more appropriate for post-2020 considering the technological evolution. The feasibility is 'medium' because monitoring of both indicators need data collection after project completion and therefore additional information to usual project reporting (e.g. survey to service providers).
- *ICT use on supported enterprises (IP2b).* A new indicator is proposed to measure the number of supported enterprises which have a 'high' level of digital intensity at project completion. Further details are provided in the indicator fiche. The feasibility of this indicator is 'high' because the assessment of digital intensity can be set up in the application phase and then updated at project completion. In this regard, it is also interesting to notice that most programmes consulted considered the proposed indicator not relevant. However, all the programme-specific output indicators measuring direct results had a similar formulation. Therefore, the indicator is included in the proposal.
- *Interaction and communication with public authorities (IP2c).* Two new indicators are proposed to measure the number of individuals interacting online with the public administrations and enterprises using public digital services after the support strengthening ICT applications for e-government, e-learning, e-inclusion, e-culture and e-health. These indicators inform on the type of user (e.g. individuals or enterprises) is involved in the e-services provided. Their feasibility is 'medium' because they need reporting on the use of services after project completion, requiring additional information from beneficiaries in addition to final project report.

Table 8 Proposed direct result indicators – TO 2

Direct result indicator (measurement unit)	Continuity with 2014-2020	Intervention fields	Investment priority	Feasibility
D.30 Household subscribing broadband of at least 100 Mbps (number)	Existing and refined (CO10)	045, 046, 047	ERDF: 2a	Medium 
D.31 Enterprises subscribing broadband of at least 100 Mbps (number)	Existing and refined (CO10)	045, 046, 047	ERDF: 2a	Medium 
D.32 Supported Enterprises with High levels of Digital Intensity (number)	New	082	ERDF: 2b	High 
D.33 Individuals interacting online with supported public authorities (number)	New	078, 079, 080, 081	ERDF: 2c	Medium 
D.34 Enterprises interacting online with supported public authorities (number)	New	078, 079, 080, 081, 082	ERDF: 2c	Medium 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility. Intervention field 048 is not attributed to any direct result indicator being rather broad.

2. CANDIDATE POST-2020 TO 7 COMMON INDICATORS

2.1. Budget allocation and investment priorities

Thematic Objective 7 supports investments in network infrastructure in transport and energy. According to EC Cohesion data¹⁷, the total budget planned for TO 7 is around 71 billion euro, of which 54.4% is covered by CF (national and EU contribution) and 45.6% by ERDF (national and EU contribution). Of the 38.8 billion euro of CF, 84% is covered by the EU amount, while of the 32.5 billion euro of ERDF, 80% represents the EU amount and all the rest the national amount.

The analysis of investment priorities shows the main purposes of the TO 7 interventions and is useful in the light of the identification of the direct results. TO 7 is split into the following investment priorities, as reported in the table considering both ERDF and CF regulations.

Table 9 ERDF and CF investment priorities – TO 7

IP	ERDF IPs	CF IPs
Supporting a multimodal Single European Transport Area by investing in the TEN-T;	7a	7i
Enhancing regional mobility by connecting secondary and tertiary nodes to TEN-T infrastructure, including multimodal nodes	7b	/
Developing and improving environmentally-friendly (including low-noise) and low-carbon transport systems, including inland waterways and maritime transport, ports, multimodal links and airport infrastructure, in order to promote sustainable regional and local mobility	7c	7ii
Developing and rehabilitating comprehensive, high quality and interoperable railway systems, and promoting noise-reduction measures	7d	7iii
Improving energy efficiency and security of supply through the development of smart energy distribution, storage and transmission systems and through the integration of distributed generation from renewable sources;	7e	/

Source: ERDF (EU regulation 1301/2013) and CF regulation (EU regulation 1300/2013).

¹⁷ Data downloaded 19 April 2018 from the open cohesion data platform.

2.2. Gap analysis

The following table shows the use of 2014-2020 common output indicators at IP level.

Table 10 Use of output indicators – TO 7 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
7a	13	48	61	79%
7b	31	101	132	77%
7c	82	16	98	16%
7d	26	25	51	49%
7e	25	4	29	14%
Total ERDF	177	194	371	52%
7i	32	53	85	62%
7ii	32	9	41	22%
7iii	18	8	26	31%
Total CF	82	70	152	46%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020¹⁸.

In the 2014-2020 period, common output indicators are more frequently used for IP 7a, 7b and almost not used for IP 7e.

Table 11 Focus on common output indicators – TO 7 (ETC not included)

IP	IP 7a	IP 7b	IP 7c	IP 7d	IP 7e	IP 7i	IP 7ii	IP 7iii	Total	Type of indicator based on the conceptual framework of the study
CO11	3	4	1	2		1	1		12	Output
CO11a	3	1	1			1	1		7	Output
CO12	6	4	3	20		7	1	4	45	Output
CO12a	5		1	3		7	1	4	21	Output
CO13	8	38	1			10			57	Output
CO13a	7					10			17	Output
CO14	8	51	1			7			67	Output
CO14a	7	1				7			15	Output
CO15			1				4		5	Output
CO16		1	3			3			7	Output
CO33					4				4	Direct result
CO34	1	1	2				1		5	Direct result
CO37			2						2	Output
Total	48	101	16	25	4	53	9	8	264	/

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020¹⁹.

¹⁸ Data source refers to October 2017. The data source is the same for all the TOs.

¹⁹ Idem.

Investment priority 7a (ERDF) and 7i (CF)

As in TO 4, 5 and 6, also in TO 7, common output indicators are more frequently used in ERDF and CF programmes in respect to programme-specific indicators: 79% of the instances of use in ERDF programmes are from the common list and 62% in CF. Indicators for these two investment priorities relate to TEN-T development and measure real outputs and are CO12 'Total length of reconstructed or upgraded railway line' CO12a, CO13 'Total length of newly built roads', CO13a, CO14 'Total length of reconstructed or upgraded roads', CO14a. The sub-indicators 'COxxa' refer to km within TEN-T, for instance, CO12a measures the total length of reconstructed or upgraded railway line within TEN-T network.

Investment priority 7b (ERDF)

The common output indicators represent more than 3/4 of the programme output indicators and measure outputs. The most frequently used indicators are CO13 and CO14. Sub-indicators such-as 11a, 12a, 13a, 14a have been used to a very limited extent being the focus of the investment priorities on the connection of secondary and tertiary nodes to TEN-T infrastructure.

Investment priority 7c (ERDF) and 7ii (CF)

The common output indicators represent less than 1/4 of the programme output indicators and measure real outputs and /or direct results (e.g. expected reduced GHG emissions). Common output indicators are more frequently used in CF than in ERDF programmes in respect to programme-specific indicators. The most frequently used indicators in IP 7c are CO12 and CO16 'Total length of new or improved inland waterway', while CO15 'Total length of new or improved tram and metro lines' in IP7ii.

Investment priority 7d (ERDF) and 7iii (CF)

Common output indicators are more frequently used in ERDF than in CF programmes: 49% of the instances of use in ERDF programmes are from the common list and 31% in CF. The most frequently used indicators are CO12 and CO12a and relate to the railway line.

Investment priority 7e (ERDF)

The IP shows one of the lowest level of use of the common output indicators. The unique indicator used is CO33 'Number of additional energy users connected to smart grids' and measures a direct result.

2.3. Consultation findings

2014-2020 common indicators

MA consultation identified potential issues in the current indicators system based on the main assessment criteria (in particular RACER criteria).

Table 12 MA consultation - Interviewees answering 'yes' and OPs consulted

Indicator	Coverage of the type of intervention	Difficult definition	Difficult data collection	Higher measurement costs	No. of OPs consulted
CO11	100%	0%	0%	0%	4
CO11a	100%	0%	0%	0%	1
CO12	76%	13%	0%	0%	15
CO12a	93%	13%	0%	0%	14
CO13	82%	5%	0%	0%	15
CO13a	100%	9%	0%	0%	9
CO14	90%	15%	0%	0%	15
CO14a	100%	11%	0%	0%	9
CO15	67%	0%	0%	0%	13
CO16	100%	0%	0%	0%	4

Source: Own elaborations of MA consultation.

All the indicators in the table above are relevant, ensuring an appropriate thematic coverage, even if CO15 is the indicator presenting the lower level of coverage.

CO12a presents some difficulties with the definition due to the difference between reconstruction and upgrade of supported infrastructure. Moreover, regarding the measurement, the consultation highlights that it is not clear how many times the same section of railway reconstructed or upgraded with more than intervention can be counted.

CO13a and CO14a do not present specific issues. Indicators CO11a, CO13 and CO16 are considered relevant and they do not present any specific difficulties with both, definition and data collection. All other indicators have already been analysed in Part I of the study.

Programme-specific output indicators

Consultation helped assess programme-specific output indicators. The analysis builds on the same sample as the general consultation, so the number of programme-specific indicators reflects the use and features of programmes selected according to the EU Overall, the analysis builds on 4 programmes using IP 7a, 6 IP 7b, 6 IP 7c, 4 IP 7d, 3 IP 7e, 12 IP 7i, 6 IP 7ii, 6 IP 7iii.

Investment priority 7a/7i

Programme-specific output indicators capture the following outputs: 'Reconstructed access roads and railway', 'Constructed multimodal transport node', 'Constructed, reconstructed or upgraded alternative truck roads, streets and flyovers for interlinking with TEN-T', 'Footpath or cycleway created or reconstructed', 'Number of purchased/upgraded rolling stocks', 'Length of railway lines equipped with ERTMS', 'Number of new train control systems'.

Investment priority 7b

Programme-specific output indicators are formulated either as process indicators (measuring the number of interventions) or as output indicators capturing 'New applications for security', 'Reconstructed or/and upgraded road axes of other road network', 'Number of black spots eliminated'.

Investment priority 7c/7ii

Programme-specific output indicators regard seaports (e.g. the surface of the intervention) and number of airport supported, railway and road connections. Other indicators regarding mobility are proposed such as 'Length of busways being constructed', 'Open spaces created or restored to improve urban mobility', 'Length of cycle path network being constructed', 'Number of vehicles / passenger rolling stocks modernised or purchased', 'Modernised intermodal terminals'. This list is linked with the list of indicators in TO 4.

Investment priority 7d

Programme-specific output indicators measure the 'km or number of railways (non-TEN T)', 'purchased rolling stocks', 'integrated GSM-R Network'.

Investment priority 7e

Indicators capture real outputs and measure the length of new / reconstructed power transmission lines and gas pipelines, the gas stations and storage gas capacity. They are similar to TO 4 indicators on distribution networks.

Draft proposal of direct result indicators

The consultation interviewed MAs to identify candidate direct result indicators based on a preliminary list. The following proposed indicators are considered relevant by almost half the interviewees: 'Number of passengers using public transport in the area covered by the project', 'The length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations', 'Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes', 'Railway and waterway freight transport volume' and 'Time savings in the public transport system covered by the supported project'.

Table 13 MA consultation on a preliminary list of direct result indicators²⁰

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	No. of OPs consulted
Increase in the transport volumes in combined transport	31%	Survey (60%)	1 year after completion (80%)	20%	18
Number of passengers using public transport in the area covered by the project	65%	Project reporting (42%)	1 year after completion (75%)	67%	18
Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes	41%	Project reporting (57%)	Project completion (71%)	13%	18
Railway and waterway freight transport volume	47%	External registers / Survey (44%)	1 year after completion (100%)	56%	18
The length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlement agglomerations	47%	Project reporting (88%)	Project completion (100%)	0%	18
The length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations	39%	Project reporting (86%)	Project completion (50%)	25%	18
Time savings in the public transport system covered by the supported project	50%	Project reporting (45%)	Project completion (80%)	55%	18

²⁰ For the indicator 'The length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations' the second preferred option, regarding timing, is 1 year after project completion.

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	No. of OPs consulted
Users connected to the new or upgraded network	29%	Project reporting (80%)	Project completion (53%)	33%	18

Source: Own elaborations of MA consultation.

Moreover, consulted MAs have suggested *inter alia* the following direct result indicators:

- Number of passengers-kilometres transported per year in basic rail transport network,
- Number of tons merchandise(kilometre),
- Tons per year of goods transported by rail,
- Annual tons of goods transported by rail,
- Line (%) that have ERTMS in relation to the total of lines that must have ERTMS,
- Traveling time savings,
- Traffic noise reduction,
- Environmental pollution reduction,
- Reduction of mortality in traffic accidents.

2.4. Allocation of planned resources

When analysing the potential for improved and/or new output indicators within TO 7, it is worthwhile looking at activities within OPs based on the intervention fields.

Table 5 shows the most frequently used intervention fields of TO 7. ETC programmes and priority axes with more than one TO have not been included from this overview.

Table 14 Intervention fields of TO 7, ETC not included²¹

Intervention field	Code of the intervention field	Share of the EU amount (CF+ERDF) of TO 7	Share of the EU amount (CF) of TO 7	Share of the EU amount (ERDF) of TO 7
Railways (TEN-T Core)	024	15%	16%	12%
Railways (TEN-T comprehensive)	025	8%	12%	/
Other Railways	026	7%	5%	10%
Mobile rail assets	027	4%	4%	3%
TEN-T motorways and roads - core network (new build)	028	17%	24%	6%
TEN-T motorways and roads - comprehensive	029	12%	17%	5%

²¹ Values corresponding to '/' are below 2%. Intervention fields 039 'Seaports', 041 'Inland water ways and ports (TEN-T)' are not reported under ERDF column and reach values between 1 and 2% and can be associated to IP 7e. Another intervention field 044 'Intelligent transport systems (including the introduction of demand management, tolling systems, IT monitoring control and information systems)' is relevant for both ERDF and CF but financial values lower than 1% of the total budget.

network (new build)				
Secondary road links to TEN-T road network and nodes (new build)	030	4%	/	10%
Other national and regional roads (new build)	031	3%	/	9%
TEN-T reconstructed or improved road	033	4%	4%	2%
Total of the intervention fields		92%	94%	79%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020²²

Most of TO 7 resources concentrate on a small set of intervention fields regarding railways, roads and motorways, with a distinction between TEN-T and secondary ways and nodes.

2.5. Literature review

EU level

The list of DG MOVE performance indicators has been also examined to identify potential common indicators. The list foresees a set of indicators divided in three specific objectives: 1) Removing bottlenecks, enhancing rail interoperability, bridging missing links, and improving cross-border sections, 2) Ensuring sustainable and efficient transport systems in the long run, with a view to preparing for expected future transport flows, as well as enabling the decarbonisation of all modes of transport through transition to innovative low-carbon and energy-efficient transport technologies, while optimising safety; 3) Optimising the integration and interconnection of transport modes and enhancing interoperability of transport services, while ensuring the accessibility of transport infrastructures.

Table 15 DG MOVE indicators

Specific objective	Indicators
Specific Objective 1: Removing bottlenecks, enhancing rail interoperability, bridging missing links, and improving cross-border sections	Indicator 1: The number of removed bottlenecks on new or improved cross-border connections
	Indicator 2: Km of lines in service equipped with the European Railway Traffic Management System (ERTMS), linked to TEN-T
	Indicator 3: The number of removed bottlenecks which have received funding from the CEF
	Indicator 4: The length of the inland waterway network by class in the Union
	Indicator 5: The length of the railway network in the EU-28 upgraded following the requirements set out in Article 39(2) of Regulation (EU) No 1315/2013
	Indicator 6: Setting up of the core network corridors structures with designation of Coordinators, creation

²² <https://cohesiondata.ec.europa.eu/EU-Level/ESIF-2014-2020-categorisation-ERDF-ESF-CF/9fpg-67a4>.

Specific objective	Indicators
<p>Specific Objective 2: Ensuring sustainable and efficient transport systems in the long run, with a view to preparing for expected future transport flows, as well as enabling the decarbonisation of all modes of transport through transition to innovative low-carbon and energy-efficient transport technologies, while optimising safety</p>	<p>of Corridor Forums and approval of work plans.</p> <p>Indicator 1: The number of supply points for alternative fuels for vehicles using the TEN-T core network for road transport in the EU-28</p>
	<p>Indicator 2: The number of inland and maritime ports of the TEN-T core network equipped with supply points for alternative fuels in the EU-28</p> <p>Indicator 3: Number of fatalities in road transport accidents</p>
<p>Specific Objective 3: Optimising the integration and interconnection of transport modes and enhancing interoperability of transport services, while ensuring the accessibility of transport infrastructures</p>	<p>Indicator 1: The number of multimodal logistic platforms, including inland and maritime ports and airports, connected to the railway network</p>
	<p>Indicator 2: The number of new and improved rail-road terminals</p>
	<p>Indicator 3: Number of improved or new connections between ports through motorways of the sea</p>
	<p>Indicator 4: The number of kilometres of inland waterways fitted with RIS (River Information Services)</p>
	<p>Indicator 5: Synchronisation of the deployment process of SESAR related technology</p>
<p>Indicator 6: Kilometres of roads covered by (real-time) Traffic Information Services or equipped for (dynamic) Traffic Management, including speed related ITS (Intelligent Transport System) services (Variable Message Signs or equivalent means)</p>	

Source: DG MOVE

ECA reports

The European Court of Auditors (ECA) has analysed projects regarding railway networks in the special report No 8/2016 on rail freight transport and No.13/2017 about a single European rail traffic management system (ERTMS)²³. The first report highlights:

- the low performance of rail freight transport in Europe in terms of volume and modal share and commercial speed of freight trains,
- the risk of low comparability of indicators because in accordance with the regulation, performance indicators have been set at the level of each corridor,
- the need of improving the existing list of indicators in terms of timeliness and quality of data, which, however, depends on the availability of data at country level.

The second report shows low status of ERTMS deployment and highlights that this puts the achievement of 2030 targets under risks as well as the single EU railway area.

International sources (World Bank)

The list of World Bank core indicators allows identifying inspiring inputs for the definition of new indicators for TO 7.

- Roads constructed (km)
 - (i) Rural
 - (ii) Non-rural
- Roads rehabilitated (km)
 - (i) Rural
 - (ii) Non-rural
- Roads in good and fair condition as a share of total classified roads (percentage)
 - (i) Size of the total classified network
- Share of rural population with access to an all-season road (proportion)
 - (i) Number of people with access to an all-season road
- Average time from ship readiness to unload to final destination for an imported container, on the corridor(s) targeted by the project (days)
 - (i) Freight volume measured in TEU in targeted corridor.

The indicator on road constructed / rehabilitated is part of the World Bank corporate indicators.

²³ See European Court of Auditors (2016, 2017c).

2.6. Candidate indicators for the post-2020 period

The proposed candidate indicators encompass input, process, output and direct result indicators. Input indicators are defined as for TO 2.

A. Process indicators

Four groups of process indicators are proposed covering the type of beneficiaries, their characteristics, the form of finance and the number of projects. The detailed list is provided in section 1.6 of the report.

B. Output indicators

Gaps identified: the main weaknesses of the 2014-2020 common indicators set regard IPs 7c, 7d, 7e, 7ii, 7iii.

Key outputs: different outputs correspond to the IPs.

Proposed output indicators

- The proposed list of candidate output indicators confirms a lot of existing indicators regarding transport sector
- New indicators are proposed to address the main weaknesses highlighted by the gap analysis.

Table 16 Proposed output indicators – TO 7

Output indicator (measurement unit)	Continuity 2014-2020	with	Intervention field	Investment priority
O.9 Railway: Total length of newly built railway line (km)	Existing (CO11)		026, 027	ERDF: 7b
O.10 Railway: Total length of reconstructed or upgraded railway line (km)	Existing (CO12)		026, 027	ERDF: 7b
O.11 Total length of new or improved environmentally-friendly (including low-noise) and low-carbon transport lines (km)	Existing slightly (CO15)	and refined	All	ERDF: 7c CF: 7ii
O.43 Roads: Total length of newly built roads (km)	Existing (CO13)		031	ERDF: 7b
O.44 Roads: Total length of newly built roads, of which: TEN-T (km)	Existing (CO13a)		028, 033	ERDF: 7a CF: 7i
O.45 Roads: Total length of reconstructed or upgraded roads (km)	Existing (CO14)		031	ERDF: 7b
O.46 Roads: Total length of reconstructed or upgraded roads, of which: TEN-T (km)	Existing (CO14a)		028, 033	ERDF: 7a CF: 7i
O.47 Railway: Total length of reconstructed or upgraded railway	Existing (CO12a)		024, 027	ERDF: 7a CF: 7i

Output indicator (measurement unit)	Continuity with 2014-2020	Intervention field	Investment priority
line, of which: TEN-T (km)			
O.48 Railway: Total length of newly built railway line, of which: TEN-T (km)	Existing (CO11a)	024, 025, 027	ERDF: 7a CF: 7i
O.49 Total length of new or improved inland waterways (km)	Existing (CO16)	039, 042	ERDF: 7a CF: 7i
O.17 Low-emission public transport vehicles purchased or refitted (number)	New, based on programme-specific output indicators	043, 083	ERDF: 7c CF: 7ii
O.19 Purchased railway vehicles	New, based on programme-specific output indicators	043, 083	ERDF: 7c CF: 7ii
O.26 Carrying capacity of low carbon transport vehicles (total passengers)	New, based on programme-specific output indicators	024, 025, 026, 027	ERDF: 7c CF: 7ii
O.50 Number of developed or reconstructed multimodal freight nodes (number)	New	All	ERDF: 7b, 7c, 7d CF: 7ii, 7iii
O.51 Number of eliminated black spots on roads connecting regional centres to TEN-T network (number)	New	030	ERDF: 7b
O.52 Number of developed / upgraded passenger transport intermodal terminals (number)	New	All	ERDF: 7b, 7c CF: 7ii
O.53 Number of developed / improved transport management systems to improve safety and effectiveness of transport (ITS) (km)	New	044	ERDF: 7c CF: 7ii
O.54 Number of newly developed or reconstructed ports of which TEN-T (km)	New	039	ERDF: 7a, 7c CF: 7i
O.55 Number of developed / upgraded airports of which TEN-T (number)	New	037	ERDF: 7a, 7c CF: 7i, 7ii
O.57 Total length of railways equipped with ERTMS (number)	New	024, 025, 026, 027	ERDF: 7d CF: 7iii
O.58 Total length of new / upgraded energy distribution networks (km)	New, based on programme-specific output indicators	005, 007, 008	ERDF: 7e

Investment priority 7a /7i

As for the TEN-T network development, all the proposed indicators confirm existing indicators.

Investment priority 7b

Regarding the priority 7b, new indicators are suggested, monitoring number of eliminated black spots on the priority roads and number of multimodal nodes connecting to TEN-T network.

Investment priority 7c/7ii

Most of the new indicators are suggested for IP 7c, where an only one common indicator has been used by programmes. They are similar to indicators proposed for urban sustainable mobility (IP 4e). The existing CO15 is revised. It is formulated to measure other means of transport such as trolley-buses and electro buses.

Investment priority 7d/7iii

The indicators focus on activities related to ERTMS development and bottlenecks on railway lines.

Investment priority 7e

One new indicator is proposed to monitor newly developed energy distribution networks.

C. Direct result indicators

Gaps identified: lack of indicators measuring direct results.










Key direct results: different direct results for each IP.

Proposed direct result indicators

- *Investment priority 7a /7i.* As for the TEN-T network development, two indicators on the full upgraded corridors are proposed. Their feasibility is high, because the benefit in terms of upgraded network coming from the intervention could be available in the application form and therefore the final project report will confirm (or not) the expected benefits.
- *Investment priority 7b.* Regarding the priority 7b a new indicator is proposed to monitor the population living in areas with fully upgraded TEN-T corridors. The feasibility of this indicator is medium because it requires ad hoc study or survey of service providers. The feasibility depends on the type of information available at service providers' level.
- *Investment priority 7c/7ii and 7d/7iii.* For IP 7c/7ii, the new indicators proposed regard time savings and number of passengers using public transport. For IPs 7c/7ii and 7d/7iii two indicators on transport volume are proposed. All the indicators have a medium feasibility because they need some time to be monitored after project completion implying an additional reporting tool to the final project report.
- *Investment priority 7e.* The indicator on the users of the distribution networks is proposed. Its feasibility is medium.

All these indicators have been proposed despite some of them have been considered less relevant by consulted MAs. However, they represent a reference for ensuring a broad list of indicators measuring direct results of the supported interventions. Moreover, the indicator on GHG emissions has been proposed as in TO 4. Its feasibility is low, and it can be confirmed as a direct result indicator with a common definition and methodology ensuring aggregation and comparability of data.

Table 17 Proposed direct result indicators – TO 7

Direct result indicator (measurement unit)	Continuity with 2014-2020	Intervention fields	Investment priority	Feasibility
D.21 Estimated GHG emissions (tons of CO2 Equivalent)	Existing and refined (CO34)	All	7e, but potentially all	Low 
D.12 Public transport users (passengers)	New	All	7c	Medium 
D.35 The length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlement agglomerations (km)	New	024, 025, 026, 027	7a/7i	High 
D.36 The length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations (km)	New	028, 029, 030, 031, 033	7a/7i	High 
D.37 Time savings in the public transport system covered by the supported project (minutes)	New	All	7c	Medium 
D.38 Railway freight transport volume (tonnes)	New	024, 025, 026, 027	7c, 7d	Medium 
D.39 Waterway freight transport volume (tonnes)	New	041	7c, 7d	Medium 
D.40 Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes (number of people)	New	All	7b	Medium 
D.48 Users connected to the new or upgraded network (number)	New	005, 007, 008 (mainly under ERDF)	7e	Medium 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility.

3. CANDIDATE POST-2020 TO 8 COMMON INDICATORS

3.1. Budget allocation and investment priorities

Thematic Objective 8 promotes sustainable and quality employment as well as labour mobility. According to EC Cohesion data²⁴, the total budget planned for TO 8 is around 59.5 billion Euro, with 43.5 billion Euro as EU contribution. Around 68% of the total budget (national and EU contribution) is covered by ESF, 17% by YEI, 7% by ERDF, 6% by EAFRD and the remainder by EMFF. TO 8 represents around 1.5% of the total (national and EU) ERDF budget.

Of the 4.1 billion Euro covered by ERDF, 0.8 billion (20%) is coming from national sources and 3.3 billion Euro from the EU (80%).

Regulation (EU) 1301/2013 defines four investment priorities for TO 8:

- IP 8a: supporting the development of business incubators and investment support for self-employment, micro-enterprises and business creation;
- IP 8b: supporting employment-friendly growth through the development of endogenous potential as part of a territorial strategy for specific areas, including the conversion of declining industrial regions and enhancement of accessibility to, and development of, specific natural and cultural resources;
- IP 8c: supporting local development initiatives and aid for structures providing neighbourhood services to create jobs, where such actions are outside the scope of Regulation (EU) No 1304/2013 of the European Parliament and of the Council;
- IP 8d: investing in infrastructure for employment services.

²⁴ Data downloaded 19 April 2018 from the cohesion data platform.

3.2. Gap analysis

Table 18 shows the use of 2014-2020 common output indicators for TO 8 at IP level.

Table 18 Use of output indicators – TO 8 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
8a	2	8	10	80%
8b	35	61	96	64%
8c	12		12	0%
8d	2		2	0%
Total	51	69	120	58%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020²⁵.

During the 2014-2020 programme period, common output indicators have been frequently used to measure interventions for IP 8a and IP 8b, but they have not been used at all for IP 8c and IP 8d. Instead, programme specific output indicators have been applied under the latter two IPs. Overall, 58% of all indicators in TO 8 are common indicators. The last column of the table shows the categorisation of 2014-2020 common output indicators according to the conceptual framework of the study.

Table 19 Focus on common output indicators – TO 8 (ETC not included)

Indicator	8a	8b	8c	8d	Total	Type of indicator based on the conceptual framework of the study
CO01	5	12			17	Process
CO02	1	9			10	Process
CO03	1	2			3	Process
CO04		5			5	Process
CO05		2			2	Process
CO06		4			4	Direct result
CO07		1			1	Direct result
CO08	1	9			10	Direct result
CO09		3			3	Direct result (expected)
CO13		1			1	Output
CO14		2			2	Output
CO22		2			2	Output
CO32		2			2	Direct result
CO34		2			2	Direct result
CO37		1			1	Output (even if it can be seen as a direct result)
CO38		1			1	Output
CO39		3			3	Output
Total	8	61	0	0	69	/

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

As shown in Table 19, 2014-2020 common output indicators were used in 69 instances under TO 8, albeit use of these indicators was restricted to IP 8a and IP 8b. At TO level, 2014-2020 common indicators have most often been used to describe the main stakeholders (CO01 and CO02: Number of enterprises receiving support or grants) or direct results (CO08: Employment increase in supported enterprises). Further details on the use of common output indicators at IP level are provided below.

Investment priority 8a

²⁵ Data source refers to October 2017. The data source is the same for all the TOs.

Common output indicators have been used only in eight instances for IP 8a on 'Business incubators and investment support'. CO01 'Number of enterprises receiving support' has been the most frequently used. Indicators CO02 'Number of enterprises receiving grants', CO03 'Number of enterprises receiving financial support other than grants' and CO08 'Employment increase in supported enterprises' have each been used only once. Overall, the output indicators used under IP1a mostly can be classified as process and direct result indicators based on the conceptual framework of the study.

Investment priority 8b

Within TO 8, most common output indicators have been used in IP 8b, namely CO01 'Number of enterprises receiving support', CO02 'Number of enterprises receiving grants' and CO08 'Employment increase in supported enterprises' have been used most frequently. The focus is hence on measuring the number of supported entities (CO01, CO02), the type of support (CO02) as well as on reporting results (CO08).

A range of additional common output indicators have been used between one and five times for IP 8b. These can be classified as process (CO03), output (CO13) and direct result indicators (e.g. CO09).

Investment priorities 8c and 8d

Common output indicators have not been used at all in IP 8c on local development initiatives and in IP 8d on investments for employment services. Instead, programme-specific indicators have been used 12 times in IP8c and twice in IP8d.

3.3. Consultation findings

2014-2020 common indicators

Managing Authorities have been consulted to identify potential issues with the current common output indicators.

Table 20 MA consultation - Interviewees answering 'yes' and OPs consulted

Indicator	Coverage of the type of intervention	Difficult definition	Difficult data collection	Higher measurement costs	No. of OPs consulted
CO01	91%	10%	27%	15%	56
CO02	92%	3%	24%	16%	47
CO08	89%	21%	41%	53%	40

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

CO01, CO02 and CO08 are the three common indicators which have been more frequently used under TO 8 during the 2014-2020 programming period. Consulted MAs report that all three indicators ensure very high coverage in terms of the main types of intervention. The largest challenges concern the data collection and measurement costs.

Indicators CO01 and CO02 have caused few problems in terms of definition and measurement. The main issue is related to double counting.

CO08 is the most challenging indicator of the three examples. MAs for instance report difficulties in deciding when to measure employment effects. Respondents argued that new jobs may be created but later lost if a supported enterprise has to close down, and it is not clear whether to count these jobs for the indicator. MAs also stated that employment may fall after the intervention, and the indicator does not allow them to capture this effect. Measurement costs for indicator CO08 are considered high by 53% of MAs²⁶.

2014-2020 programme-specific output indicators

The consulted MAs have used only programme-specific output indicators for investment priorities 8b and 8d. Therefore, the following sections focus on these two IPs only²⁷. Even though all programme-specific indicators mentioned below are currently defined as output indicators, we divide them into process, output and direct result indicators according to the definitions introduced in the present study. The analysis builds on a sample of 8 programmes using IP 8b and 2 using IP 8d.

Investment priority 8b

- *Process indicators* - One example of a process indicator is 'Number of projects focusing on city/surrounding countryside/functional spaces as well as on upgrading deprived neighbourhoods'.
- *Output indicators* - These include 'Premises created or refurbished (square meters)', 'Number of tourism and recreation objects supported' and 'Land developed (hectares)'.
- *Result indicators* - The programmes measure the result of interventions, for instance in terms of 'Jobs accommodated (number)'.

Investment priority 8d

²⁶ See Part I of the study in the section related to TO 1 (section 3).

²⁷ The consulted programmes have not used any other programme-specific output indicators in IPs 8a and 8c.

- *Output indicators* – An example has been reported by MAs for IP 8d: ‘Infrastructure units supported by investments’.

Post-2020 direct result indicators

During the consultation, MAs were also asked to comment on a preliminary list of direct result indicators reported in the following table. Among the four indicators that were submitted to consultation, one was considered relevant by most of the Managing Authorities ‘Visitors of supported cultural and natural heritage’, which has already been used by 50% of all consulted MAs. Project reporting is considered the most appropriate source for the indicator monitoring, and MAs suggest measuring the indicator one year after project completion. This indicator is very similar to one of the proposed indicators for TO 6. The other three indicators are considered relevant by between 33% and 42% of consulted MAs. Consulted MAs suggested an indicator measuring entrepreneurship, i.e. the number of newly established enterprises, or enterprises which moved to the area covered by the intervention.

Table 21 MA consultation on a preliminary list of direct result indicators²⁸

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	OPs consulted
Enterprises using the services of supported business incubators and small investment facilities after project completion (number)	33%	Project reporting (83%)	One year after completion (50%)	20%	13
Job seekers using services of supported employment service infrastructure one year after project completion (number)	33%	Project reporting (50%) / Survey (50%)	One year after completion (50%)	25%	13
Survival of incubated (newly born) enterprises one year after project completion supporting business incubators and investment	42%	Project reporting (60%)	One year after completion (60%)	50%	13

²⁸ For the indicator ‘Job seekers using services of supported employment service infrastructure one year after project completion’ the second preferred source is external registers (40%) and the second preferred option regarding timing is ‘at project completion’ (25%).

Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020 – Part II

facilities (in percent)	(in percent)					
Visitors of supported cultural and natural heritage (number)	of	75%	Project reporting (80%)	One year after completion (60%)	50%	13

Source: Own elaborations of MA consultation.

3.4. Allocation of planned resources

Table 22 shows the intervention fields of TO 8. ETC programmes and priority axes with more than one TO have not been included.

Table 22 Intervention fields of TO 8, ETC not included²⁹

Intervention field	Code of the intervention field	Share of the EU amount of TO 8
Other social infrastructure contributing to regional and local development	055	26%
Business infrastructure for SMEs (including industrial parks and sites)	072	16%
Development and promotion of the tourism potential of natural areas	091	10%
Infrastructure for early childhood education and care	052	9%
Protection, development and promotion of public cultural and heritage assets	094	7%
Other reconstructed or improved road (motorway, national, regional or local)	034	5%
Rehabilitation of industrial sites and contaminated land	089	5%
SME business development, support to entrepreneurship and incubation (including support to spin offs and spin outs)	067	5%
Development and promotion of cultural and creative assets in SMEs	076	4%
Total		88%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

- Intervention fields in TO 8 focus on promoting social and business infrastructure for SMEs as well as investments in the development of roads, touristic sites and industrial or contaminated sites. Most resources concentrate on: social infrastructure development (intervention field 055), business infrastructure for SMEs (intervention field 072) and the touristic development of natural areas (intervention field 091).
- Between 4% and 9% of the budget is spent on intervention fields 052 'Infrastructure for early childhood development and care', 094 'Protection, development and promotion of public cultural and heritage assets', 034 'Other reconstructed or improved road', 089 'Rehabilitation of industrial sites and contaminated land', 067 'SME business development, support to entrepreneurship and incubation' and 076 'Development and promotion of cultural and creative assets in SMEs'. Eleven additional intervention fields that received from 0.1% to 3% of the budget in TO 8 are not included in the table.

²⁹ Between 1% and 3% of TO 8 resources are spent on intervention fields '092 Protection, development and promotion of public tourism assets', '032 Local access roads (new build)', '067 SME business development, support to entrepreneurship and incubation (including support to spin offs and spin outs)', '090 Cycle tracks and footpaths' and '066 Advanced support services for SMEs and groups of SMEs (including management, marketing and design services)'.

3.5. Literature review

Other EC services

The EU International Cooperation and Development Results Framework (EURF)³⁰ contains a range of indicators such as:

- Number of people who have benefited from VET (Vocational Education and Training) / skills development and other active labour market programmes with EU support,
- Number of firms with access to credit with EU support.

United Nations

The United Nations Development Programme lists a range of output indicators in its Gender Equality Strategy 2014-2017³¹. Some of these indicators relate to the goal 'Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded'. Relevant indicators include:

- Number of new jobs and other livelihoods generated,
- Number of jobs and livelihoods created through management of natural resources, ecosystem services, chemicals and waste.

World Bank

The World Bank core sector indicator list does not include specific indicators to measure impact in the field of employment or labour mobility³². Nonetheless, several indicators related to financial support of micro and small/medium enterprises are relevant for TO 8. These include:

- Lines of credit – Microfinance and SME (amount US\$),
- Institutional development – Microfinance and SME (amount US\$),
- Enabling environment – Microfinance and SME (amount US\$).

In addition, the section 'Social protection' contains an indicator to measure involved participants/stakeholders 'beneficiaries of Labour Market programs (number)'.³²

³⁰ European Union (2018b)

³¹ United Nations Development Programme (2014).

³² World Bank (2013).

3.6. Candidate indicators for the post-2020 period

The candidate indicators proposed here include input, process, output and direct result indicators. Input indicators are defined as for TO 2.

A. Process indicators

Four groups of process indicators are proposed covering the type of beneficiaries, their characteristics, the form of finance and the number of projects. The detailed list is provided in section 1.6 of the report.

B. Output indicators

Gaps identified

- In the 2014-2020 period, 58% of all indicators used were common indicators. The most frequently used indicators are process indicators (CO01 and CO02) and direct result indicators (CO08) according to the definition used in this report.
- Common output indicators have been most frequently used for IP 8b.
- Common output indicators have not been used at all for IP 8c and IP 8d.

Key outputs emerging from the analysis

- Surface area of developed land.
- Created or refurbished premises.
- Outputs from supported investments promoting job creation.
- Number of supported touristic or recreational infrastructure facilities.

Proposed output indicators

- Existing common output indicators CO22 and CO39 are confirmed. During the 2014-2020 period, they have been used under IP 8b. They have already been defined as O.20 and O.29 in Part I of the study.
- New indicators are proposed to measure equipped, renewed or newly created business incubators and employment services³³. Indicators on incubators are useful for IP 8a, indicators on employment facilities for IP 8d.
- An additional new indicator measures the nominal value of purchased services that support incubation, entrepreneurship and start-up. This indicator has already been introduced for TO 1 and TO 3 (indicator O.6). Within TO 8, the indicator is relevant for projects under IP 8a and IP 8c.

³³ See European Commission (2010), European Court of Auditors (2014) for the definition of business incubators.

Table 23 Proposed output indicators - TO 8

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
O.6 Nominal value of purchased services supporting incubation, entrepreneurship and start-up (euro)	New, based on programme-specific output indicators and literature review	067, 104, 106	ERDF: 8a, 8c
O.7 Renewed / equipped business incubators (number)	New, based on programme-specific output indicators and the definition of business incubators of ECA (2014)	067	ERDF: 8a
O.8 Renewed business incubators (square metres)	New, based on programme-specific output indicators and literature review and the definition of business incubators of ECA (2014)	067	ERDF: 8a
O.20 Total surface area of rehabilitated land (hectares)	Existing (CO22)	089	ERDF: 8b
O.29 Public or commercial buildings newly built or renovated in urban areas (square metres)	Existing (CO39)	Various	ERDF: 8b
O.59 Built / renewed employment service infrastructure (square metres)	New	102, 103, 105, 108	ERDF: 8d

C. Direct result indicators

Gaps identified: lack of indicators measuring direct results beyond jobs created and private investments matching public support.

Key direct results






- Access to incubator services (8a).
- Created jobs, which is relevant for all IPs and especially IP 8b.
- Number of direct addressees (e.g. visitors, persons) benefiting directly from interventions in the supported areas aiming at tapping into the local development potential (IP 8c).
- Access to employment service infrastructure (IP 8d).

Proposed direct result indicators

- *Jobs created.* Existing common output indicator CO08 is confirmed as a direct result indicator. Its feasibility is medium. It can be used for all the IPs.
- *Direct addressees of local endogenous potential interventions.* One new indicator has been introduced based on programme-specific indicators. It measures the number of visitors to supported cultural and natural heritage sites in supported areas. The indicator has been proposed for TO 6. The feasibility of the indicators is medium.

- *Access to incubator services.* Two new indicators are proposed to measure the number of enterprises which use the services of supported business incubators and small investment facilities, and survival of new supported businesses three years after project completion. The relevance of the first indicator is not considered high by most of survey respondents. However, it is included in the proposed list of direct result indicator to ensure thematic coverage for IP 8a. The feasibility of both indicators is medium.
- *Access to employment service infrastructure.* A new indicator is proposed to measure the annual number of job seekers who use the services of supported employment service infrastructure after project completion. Its relevance is not considered high by most of survey respondents. However, it is included in the proposed list of direct result indicator to ensure thematic coverage for each IP. The feasibility of this indicator is medium, because it requires additional reporting activities to the usual reports after project completion. A common methodology is a precondition to adopt this indicator as a common indicator. The dedicated fiche in the annex proposes a possible solution.

Table 24 Proposed direct result indicators - TO 8

Direct result indicators (measurement unit)	Continuity	Intervention field (mainly)	IP (mainly)	Feasibility
D.4 Employment increase in supported enterprises (FTEs)	Existing (CO08)	Various	ERDF: 8a, 8b, 8c, 8d	Medium 
D.11 Survival rate of supported new firms (in percent)	New, based on literature review, harmonisation with Eurostat	001, 066, 067, 104	ERDF: 8a	Medium 
D.24 Visitors to supported cultural and natural heritage sites (total annual number)	New based on literature review and programme-specific indicators	091, 092, 093, 094, 095	ERDF: 8b	Medium 
D.41 Enterprises using the services of supported business incubators (total annual number)	New	067, 104	ERDF: 8a	Medium 
D.42 Job seekers using services of supported employment service infrastructure (total annual number)	New	102, 103, 108	ERDF: 8d	Medium 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility.

4. CANDIDATE POST-2020 TO 9 COMMON INDICATORS

4.1. Budget allocation and investment priorities

Thematic Objective 9 promotes social inclusion and combats poverty and any discrimination. According to EC Cohesion data³⁴, the total budget planned for TO 9 is around 63.8 billion Euro, with 45.3 billion Euro as EU contribution. Around 49% of the total budget (national and EU contribution) is covered by ESF, 26% by ERDF and 25% by EAFRD. TO 9 represents around 5.8% of the total (national and EU) ERDF budget.

Of the 16.2 billion Euro covered by ERDF for TO 9, 3.8 billion Euro (24%) come from national sources and 12.4 billion Euro from the EU (76%).

Regulation (EU) 1301/2013 defines four investment priorities for TO 9:

- IP 9a: investing in health and social infrastructure which contributes to national, regional and local development, reducing inequalities in terms of health status, promoting social inclusion through improved access to social, cultural and recreational services and the transition from institutional to community-based services;
- IP 9b: providing support for physical, economic and social regeneration of deprived communities in urban and rural areas;
- IP 9c: providing support for social enterprises;
- IP 9d: undertaking investment in the context of community-led local development strategies.

³⁴ Data downloaded 19 April 2018 from the open cohesion data platform.

4.2. Gap analysis

Table 25 compares the use of 2014-2020 programme-specific and common output indicators for TO 9 at IP level. The 2014-2020 common output indicators have been used frequently in IP 9c (87% of all cases). In IP 9a, programme-specific indicators have been used in most of cases, with common indicators only constituting 36% of all usages. IP 9d (41%) and IP 9b (62%) fall in between. Overall in TO 9, common indicators have been used almost as often as programme-specific indicators.

Table 25 Use of output indicators – TO 9 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
9a	178	101	279	36%
9b	88	142	230	62%
9c	4	26	30	87%
9d	36	25	61	41%
Grand Total	306	294	600	49%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020

Table 26 shows the individual common output indicators that have been used under TO 9, and how often they have been applied for each IP.

Table 26 Focus on common output indicators – TO 9 (ETC not included)

Common output indicator	9a	9b	9c	9d	Total	Type of indicator based on the conceptual framework of the study
CO01	3	8	8	5	24	Process
CO02	3	4	3	2	12	Process
CO03		1	1		2	Process
CO04				1	1	Process
CO05			6	1	7	Process
CO06		1	1	1	3	Direct result
CO07		1			1	Direct result
CO08		2	7	5	14	Direct result
CO18		2			2	Direct result
CO28	1			2	3	Process
CO29				2	2	Process
CO32	2				2	Direct result
CO34	2				2	Direct result
CO35	22	4			26	Output
CO36	57	1			58	Direct result
CO37	3	28			31	Output (can be seen as a direct result)
CO38		26		3	29	Output
CO39	7	33		3	43	Output
CO40	1	31			32	Output
Total	101	142	26	25	294	Output

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020

The five most commonly used indicators (CO36, CO37, CO38, CO39 and CO40) measure outputs and direct results of interventions in the areas urban development and social infrastructure. CO38, CO39 and CO40 focus on the number of rehabilitated housing units (CO40) and the surface area of newly built or renovated public or commercial buildings (CO39) and open spaces (CO38). CO36 and CO37 quantify the number of persons who are profiting from improved health services (CO36) and urban

development strategies (CO37). The following list elaborates on the use of common output indicators per IP.

Investment priority 9a

Common output indicators have been used 101 times under IP 9a. This IP focuses on investments in health and social infrastructure, and accordingly the most frequently used indicators focus on these themes. Indicators CO35 and CO36 measure the capacity of supported childcare or education infrastructure and the population covered by improved health services, and these two indicators have been used in 78% of all cases. Less frequently used indicators include CO39 (Public or commercial buildings newly built or renovated in urban areas), CO37 (Population living in areas with integrated urban development strategies) and CO01 and CO02 (Number of enterprises receiving support/grants).

Investment priority 9b

IP 9b focuses on the regeneration of deprived communities. With few exceptions, urban development indicators have therefore been most commonly used under this IP. CO37, CO38, CO39 and CO40 measure the surface of rehabilitated or newly created buildings (CO39) and open space (CO38) as well as rehabilitated housing units (CO40) and the number of persons living in areas with integrated development strategies (CO37). Each of these indicators has been used between 26 and 33 times.

Investment priority 9c

Common output indicators have been used in 26 instances under IP 9c. This IP supports social enterprises, and the most frequently used indicators measure the stakeholders that profit from this support. CO01 and CO05, used eight and six times, respectively, quantify the total number of enterprises receiving support and the number of supported new enterprises. CO08 measures the employment increase in supported enterprises and has been used seven times.

Investment priority 9d

Similar to investment priority 9c, common output indicators have been used only 25 times under IP 9d. Ten different indicators have been applied to measure different aspects of investments in the context of community-led local development strategies.

4.3. Consultation findings

2014-2020 common indicators

Managing Authorities have been consulted to identify potential issues with the current common output indicators.

Table 27 MA consultation - Interviewees answering 'yes' and OPs consulted

Indicator	Coverage of the type of intervention	Difficult definition	Difficult data collection	Higher measurement costs	No. of OPs consulted
CO35	91%	16%	22%	5%	22
CO36	88%	24%	27%	33%	17

Source: Own elaborations of MA consultation.

CO035 and CO36 have been the most frequently used indicators under IP 9a during the 2014-2020 programming period. Consulted MAs are overall satisfied with these indicators, reporting high coverage in terms of the main types of intervention sought and few challenges related to their definition and data collection.

For CO35, a small portion of consulted MAs report issues with indicator definition, data collection or costs. Those who consider the indicator challenging state that clarification is needed about how to count users. Moreover, it is considered difficult to measure the nominal capacity of supported childcare or educational infrastructure as opposed to measuring the number of real users.

For CO36, some state that it is difficult to exclude double counting of users, and that the population living in the area of a supported health service could not be a good indicator to estimate the number of persons who profit from the improved service. This is particularly the case if people use health services outside their immediate area of residence. MAs also state that different health services do not necessarily cover the same geographic areas and that it is difficult to sum the supported population groups. Between 24% and 33% of all consulted MAs reported challenges regarding the definition, data collection or measurement costs of indicator CO36. Again, where challenges are reported they generally refer to the calculation of the indicator, how to avoid double counting and aggregate the benefiting population of supported entities with different reach, such as regional or county hospitals, family doctors etc. It has been stated that MAs have adopted different approaches in their interpretation of the indicator, which may limit comparability between programme areas.

Table 28 shows the main findings of the MA consultation on indicators CO37, CO38, CO39 and CO40.

Table 28 MA consultation - Interviewees answering 'yes' and OPs consulted

Indicator	Coverage of the type of intervention	Difficult definition	Difficult data collection	Higher measurement costs	No. of OPs consulted
CO37	86%	0%	18%	18%	22
CO38	90%	42%	5%	5%	22
CO39	78%	8%	0%	0%	24
CO40	92%	9%	5%	9%	12

Source: Own elaborations of MA consultation.

Indicator CO37 does not provide sufficient coverage for some MAs. Among those who reported gaps with their programmes, some state that urban revitalisation requires a range of different approaches and measures that cannot be adequately captured by a single indicator alone. The definition and measurement of the indicator provided few challenges. Only the question of how to avoid double counting has been an issue.

Indicator CO38 sticks out in terms of its definition. 42% of all consulted MAs reported challenges which mostly revolved around the question which areas could be counted

as 'open space' under this indicator. Data collection and measurement costs were not considered particularly challenging by consulted MA.

Indicator CO39 proves to be the easiest indicator among the four, with no consulted MA reporting any issues with the definition, data collection or measurement costs. 78% of all MAs also state that the indicator sufficiently covers their intervention types. Overlaps between the concepts of open space and public space is the only challenge reported in using the indicator.

MAs are also generally satisfied with using indicator CO40. All state that it covers the interventions of their programmes and most do not see any challenges with its definition and data collection. Where challenges have been reported, these relate to the definition of housing units, whether to include buildings, flats, households or similar, and whether to consider only rehabilitated units or also newly built accommodation.

Common indicators have been much less frequently used for IP 9c and IP 9d than for the other IPs in TO 9. Among those indicator usages, CO01 and CO08 have been most frequently used for both IPs. Only one MA provided feedback on the use of these indicators for IP 9c, and five MAs commented on the experience of using CO01 and CO08 for IP 9d. For IP 9c and 9d the most frequently used indicators are CO01 and CO08, which have been analysed earlier in this report.

2014-2020 programme-specific output indicators

The consulted MAs have used programme-specific output indicators for investment priorities 9a, 9b and 9d during the 2014-2020 programming period. Therefore, the following sections focus on these IPs. Programme-specific output indicators are of particular relevance for investment priority 9d, where common indicators have been used less frequently than for IP 9a and IP 9b. Even though all programme-specific indicators mentioned below are currently defined as output indicators, we divide them into process, output and direct result indicators according to the definitions introduced in the present study. The analysis builds on a sample of 21 programmes using IP 9a, 18 IP 9b, 8 IP 9d.

Investment priority 9a

- *Process indicators* - One example of a process indicator is 'Primary health care providers receiving support (number)' and 'Number of supported medical entities (units)'.
- *Output indicators* - These include 'Modernised facilities for emergency medical care', 'Number of high-quality service places created (service places)' and 'Purchased modern sanitary vehicles (number of ambulances)'.
- *Result indicators* - The programmes measure the result of interventions, for instance in terms of 'Population covered by improved social services (persons)', 'Number of people in sheltered employment (persons)', 'Number of disabled people provided with suitable housing (persons)' and 'Number of persons treated in health care entities covered by the support (person/year)'.

Investment priority 9b

- *Process indicators* - One example of a process indicator is 'Number of supported projects under an integrated urban action plan'.
- *Output indicators* - These include 'Rehabilitated or newly constructed housing units (m²/number of units)' and 'Number of supported infrastructure facilities localized within revitalized areas'.
- *Result indicators* - The programmes measure the result of interventions, for instance in terms of 'Population living in areas with interventions in physical, economic and social regeneration of marginalized communities in county capitals (persons)'.

Investment priority 9d

- *Process indicators* - Two examples of process indicators used by the consulted MAs are 'Number of organisations receiving support' and 'Projects that promote links between city and village (number)'.
- *Output indicators* - These include 'Number of workshops, trainings and conferences that took place' and 'Number of strategies supported' and 'Number of persons living in areas with integrated development strategies (persons)'.
- *Result indicators* - The programmes measure the result of interventions, for instance 'Number of potential entrepreneurs assisted to be enterprise ready'.

Post-2020 direct result indicators

During the consultation, MAs were also asked to comment on a list of potential candidate direct result indicators. Only two of these indicators were considered relevant by most MAs for the types of interventions sought by their programmes. The first indicator measures the number of persons who use supported social and health care infrastructure after project completion. Consulted MAs suggest using project reporting as a source one year after project completion. The second indicator which was supported by most consulted MAs measures the number of jobs created in supported social enterprises. Again, MAs recommend using project reporting as a source for the monitoring process, which is ideally conducted at the end of the project. The other three indicators were considered relevant by several consulted MAs, but not by a majority. The indicator on the number of patent applications for start-up has been considered of limited relevance. The indicator of 'reduced population at risk of poverty' despite being rather relevant can be challenging to measure, in particular to isolate external factors affecting poverty. Therefore, it has not been included in the proposed list of direct result indicators.

Table 29 MA consultation on a preliminary list of direct result indicators³⁵

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	OPs consulted
(Additional) population using supported social and health care infrastructure	65%	Project reporting (75%)	One year after completion (56%)	55%	32
Average response time of emergency services	30%	Project reporting / External registers (45%)	One year after completion (55%)	17%	32
Jobs created (FTE) in supported Social Enterprises	53%	Project reporting (100%)	At project completion (65%)	53%	32
Number of patent applications (start-ups)	18%	Project reporting (75%)	At project completion and 2-3 years after (38%)	14%	32
Reduced population at risk of poverty or social exclusion in the supported neighbourhood	48%	Project reporting (38%)	One year after completion (46%)	20%	32

Source: Own elaborations of MA consultation.

³⁵ For the indicator 'Reduced population at risk of poverty or social exclusion in the supported neighbourhood' the second preferred source is external registers (31%).

4.4. Allocation of planned resources

Table 30 shows the main intervention fields for TO 9 based on the planned EU amount. ETC programmes and priority axes with more than one TO are not included.

Table 30 Intervention fields of TO 9, ETC not included³⁶

Intervention field	Intervention field code	TO 9 share of EU amount
Health infrastructure	053	39%
Other social infrastructure contributing to regional and local development	055	26%
Community-led local development initiatives in urban and rural areas	097	14%
Housing infrastructure	054	13%
Infrastructure for early childhood education and care	052	3%
Support to social enterprises (SMEs)	073	1%
Total		95%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020³⁷

- As with other TOs, large shares of the resources in TO 9 are spent on a small number of intervention fields that focus on infrastructure investments and development initiatives: Between 13% and 39% of the funding are spent on health infrastructure, other social infrastructure, local development initiatives and housing infrastructure.
- Smaller shares of the budget cover childcare and education infrastructure and support to social enterprises.

³⁶ Intervention fields with budget shares below 1% of the EU amount are not reported in this table.

³⁷ The link to the source can be found at <https://cohesiondata.ec.europa.eu/EU-Level/ESIF-2014-2020-categorisation-ERDF-ESF-CF/9fpg-67a4>.

4.5. Literature review

European Investment Bank

The European Investment Bank defines expected outputs and outcomes for infrastructure projects, some of which link to the areas of health and urban development.³⁸ These include:

- Beds in new/rehabilitated hospitals,
- Patients treated per year in new or rehabilitated hospitals,
- Population benefiting from other new/upgraded urban infrastructure,
- New or refurbished housing units,
- Urban streets and associated infrastructure built or upgraded (in km),
- Area developed (in ha),
- Residents benefiting from more open spaces and parks.

United Nations

The United Nations Development Programme lists a range of output indicators in its Gender Equality Strategy 2014-2017.³⁹ Some of these indicators relate to the goal 'Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded'. Some indicators of interest for this study are:

- Number of new jobs and other livelihoods generated,
- Number of jobs and livelihoods created through management of natural resources, ecosystem services, chemicals and waste,
- Number of pilot and demonstration projects initiated or scaled up.

World Bank

The World Bank defines core sector indicators for the fields of health and social inclusion⁴⁰. These encompass the following:

- Health personnel receiving training (number),
- Health facilities constructed, renovated and/or equipped (number),
- Vulnerable and marginalized people in the project area that are aware of project investments and benefits (%),
- Share of vulnerable and marginalized people of the total project beneficiaries (%).

In addition, the section 'Social protection' of corporate result indicators contains an indicator for social programmes 'Beneficiaries of social safety net programs (number)'.

³⁸ European Investment Bank (2015a, 2015b, 2017).

³⁹ United Nations Development Programme (2014).

⁴⁰ World Bank (2013).

4.6. Candidate indicators for the post-2020 period

The candidate indicators proposed here include input, process, output and direct result indicators. Input indicators are defined as for TO 2.

A. Process indicators

Four groups of process indicators are proposed covering the type of beneficiaries, their characteristics, the form of finance and the number of projects. The detailed list is provided in section 1.6 of the report.

B. Output indicators

Gaps identified: common output indicators have been used more frequently for IP 9c and less for the others.

Key outputs

- Supported health or social care facilities (number, size or capacity).
- Newly built or renovated housing units (number or size).
- Output related to local or urban development strategies.

Proposed output indicators

- To capture outputs under IP 9a, two new indicators are proposed. They measure the capacity of health care facilities and social care (including long-term and elderly care) facilities.
- Existing common output indicator CO40 is confirmed in a slightly modified version. Existing common output indicators CO22 and CO39 are confirmed.
- Existing common indicator on childcare facilities (CO35) is confirmed with a small refinement to exclude other educational services. This indicator is confirmed because it has been used in 2014-2020 within social inclusion local development strategies. It refers exclusively to the capacity of supported childcare infrastructure (ISCED-0), which is relevant for TO 9.
- New indicators are also proposed to measure the nominal value of purchased infrastructure and equipment for enterprises. These indicators have been defined for TO 1 and TO 3 (indicators O.4 and O.5). Within TO 9, they are particularly useful to measure the output of investments in IP 9c on social enterprises. The appropriate process indicator on social enterprises supported should be used.
- The existing indicator CO37 is confirmed as output indicator measuring population living in areas with integrated urban development strategies.
- The indicator measuring new or improved online services provided by public administrations proposed under TO 2 has been confirmed in the case of e-governance interventions in the relevant policy fields of this thematic objective (e.g. e-inclusion, e-health). The indicator should be combined with the appropriate project-based process indicator specifying the IP (P.16).

Table 31 Proposed output indicators - TO 9

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
O.4 Nominal value of purchased enterprise infrastructure (euro)	New, based on programme-specific output indicators	073, 113	ERDF: 9c
O.5 Nominal value of purchased enterprise equipment (euro)	New, based on programme-specific output indicators	073, 113	ERDF: 9c
O.20 Total surface area of rehabilitated land (hectares)	Existing (CO22)	089	ERDF: 9b, 9d
O.29 Public or commercial buildings newly built or renovated in urban areas (square metres)	Existing (CO39)	Various	ERDF: 9b, 9d
O.60 Rehabilitated housing units (number)	Refined (CO40)	054	ERDF: 9b, 9d
O.63 Capacity of built / renewed childcare infrastructure (ISCED-0) (children)	Refined (CO35)	052	ERDF: 9a, 9b
O.68 Population living in areas with integrated urban development strategies	Existing and refined (CO37)	Various	ERDF: 9b, 9d
O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)	New	Various	All if combined with appropriate process indicator
O.61 Capacity of built / renewed / equipped health care infrastructure (Number of beds/patients)	New, based on programme-specific indicators and literature review	053	ERDF: 9a
O.62 Capacity of built / renewed / equipped elderly care and long-term care infrastructure (Number of beds/patients)	New, based on programme-specific indicators and literature review	055	ERDF: 9a

C. Direct result indicators

Gaps identified: lack of indicators measuring direct results beyond jobs created, private investments matching public support and people using health care facilities.











Key direct results

- Number of persons using supported health or social care facilities.
- Number of persons who could find employment.
- Population living in supported housing units.
- Population living in areas that have been supported for intervention.

Proposed direct result indicators

- Four new indicators are proposed to measure the number of persons who benefit from investments under TO 9. One indicator measures the number of patients or clients who use supported health care, and one indicator those using elderly care and long-term care facilities. Moreover, another indicator measures the number of children who go to supported childcare centres and one the persons who live in housing units that were rehabilitated or newly built with project funding. Their feasibility is medium because their monitoring is based on information collected after project completion.
- Two new indicators are introduced. The first measures the waiting time to use services provided by supported health or social infrastructure and another one the average response time of emergency services in the health sector. Their feasibility is medium because they are new and require information after project completion.
- A new indicator measures the number of people who interact online with supported public authorities (particularly in the areas of e-health and e-inclusion). This indicator has been proposed for TO 2 and should be coupled with the appropriate project-based process indicator for TO 9.
- Three existing common output indicators are confirmed, now as direct result indicators (D.1, D.2, and D.4). They measure private investments matching public support and jobs create in supported enterprises. Their feasibility has been assessed in Part I of the study. The feasibility is high for the indicators on private investments and medium on jobs created.

Table 32 Proposed direct result indicators – TO 9

Indicator (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)	Feasibility
D.1 Private investment matching public support to enterprises (grants) (euro)	Existing (CO06)	073, 113	ERDF: 9c, 9d	High 
D.2 Private investment matching public support to enterprises (financial instruments) (euro)	Existing (CO07)	073, 113	ERDF: 9c, 9d	High 
D.4 Employment increase in supported enterprises (FTEs)	Existing (CO08)	Various	ERDF: 9b, 9c, 9d	Medium 
D.33 Individuals interacting online with supported public authorities (number)	New	Various	ERDF: 9a	Medium 
D.43 People using supported health care infrastructure (total annual number)	New, based on literature review and programme-specific indicators	053	ERDF: 9a	Medium 
D.44 People using supported social care (elderly care and long-term care) infrastructure (total annual number)	New, based on literature review and programme-specific indicators	055	ERDF: 9a	Medium 
D.45 People occupying supported housing units (number)	New, based on programme-specific indicators	054	ERDF: 9b, 9d	Medium 
D.46 Waiting time to use services provided by supported health or social infrastructure (average number of days)	New	080, 081, 112	ERDF: 9a	Medium 
D.47 Average response time of emergency services (minutes)	New	080, 081, 112	ERDF: 9a	Medium 
D.49 Children using supported child care (ISCED-0) facilities (total annual number)	New, based on literature review and programme-specific indicators	052	ERDF: 9a	Medium 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility.

5. CANDIDATE POST-2020 TO 10 COMMON INDICATORS

5.1. Budget allocation and investment priorities

Thematic Objective 10 invests in education, training and vocational training for skills and lifelong learning. According to EC Cohesion data⁴¹, the total budget planned for TO 10 is around 49.2 billion Euro, with 34.6 billion Euro as EU contribution. Around 80% of the total budget (national and EU contribution) is covered by ESF, 17% by ERDF and the remainder by EAFRD. TO 10 represents around 3% of the total (national and EU) ERDF budget. Of the 8.3 billion Euro covered by ERDF for TO 10, around 1.9 billion Euro (23%) come from national sources and 6.4 billion Euro from the EU (77%).

Regulation (EU) 1301/2013 defines only one investment priority for TO 10 'investing in education, training and vocational training for skills and lifelong learning by developing education and training infrastructure'.

⁴¹ Data downloaded 19 April 2018 from the open cohesion data platform.

5.2. Gap analysis

Table 33 shows the use of 2014-2020 common output indicators for TO 10. Common indicators were used only in 32% of all cases. Programme-specific indicators are hence applied in the large majority of instances.

Table 33 Use of output indicators – TO 10 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
10	168	79	247	32%
Total	168	79	247	32%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020

Table 34 shows which common output indicators have used under the single IP in TO 10. Common output indicators have been applied 79 times in TO 10, and in the overwhelming majority of cases (68 instances) it has been indicator CO35. This indicator measures the capacity of supported childcare and education infrastructure and is hence closely aligned with the theme of TO 10.

Table 34 Focus on common output indicators – TO 10 (ETC not included)

Indicator	IP 10	Total	Type of indicator based on the conceptual framework of the study
CO26	1	1	Output
CO32	4	4	Direct result
CO34	4	4	Direct result
CO35	68	68	Output
CO39	2	2	Output
Total	79	79	/

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

5.3. Consultation findings

2014-2020 common indicators

Managing Authorities have been consulted to identify potential issues with the current common output indicators. Findings on CO35 have been reported in the previous section on TO 9.

2014-2020 programme-specific output indicators

Common indicators have been used in only 32% of all instances under TO 10. Information on which programme-specific indicators MA have defined to complement the common indicators is therefore particularly relevant here. In the following, some indicators are listed. Even though all programme-specific indicators mentioned below are currently defined as output indicators, we divide them into process, output and direct result indicators according to the definitions introduced in the present study. The analysis builds on a sample of 19 programmes for TO 10.

- *Process indicators* - One example of a process indicator is 'Number of education facilities supported'.
- *Output indicators* - These include 'Updated/upgraded sections or workshops (number)', 'Area of modernised facilities (square meters)', 'Number of beds in constructed dormitories', 'Number of educational buildings object of the intervention', 'Equipped laboratories', 'Number of new e-services' and 'Capacity of subsidised university education infrastructure (persons)'.
- *Result indicators* - The programmes measure the result of interventions, for instance in terms of 'Number of students using new, extended or modernised infrastructure except the infrastructure for education that is related to research (students)' and 'Number of pupils/students using (procured) ICT equipment'.

Post-2020 direct result indicators

During the consultation, MAs were also asked to provide feedback on two potential new direct result indicators for TO 10, which measure the number of children who use supported childcare and the number of students and pupils using supported educational facilities. The large majority of MAs considered both indicators to be very relevant for their projects, and many of them already used the two indicators in their work. The consulted MAs stated that project reporting would be the appropriate source to monitor the indicator one year after the end of the project.

Table 35 MA consultation on a preliminary list of direct result indicators

Direct result indicators	Relevance	Source of monitoring	Time of monitoring	Already monitored	OPs consulted
Use of the supported education facilities (kindergartens) (ISCED-0)	76%	Project reporting (80%)	One year after completion (47%)	64%	19
Use of the supported education facilities (ISCED-1 to ISCED-8)	88%	Project reporting (81%)	One year after completion (50%)	75%	19

Source: Own elaborations of MA consultation.

Three additional indicators have been suggested during the consultation:

- Early school drop-out rate,
- Region's unemployment rate,
- Unemployment rate on ages under 30.

5.4. Allocation of planned resources

Table 36 shows the intervention fields of TO 10. ETC programmes and priority axes with more than one TO are not included.

Table 36 Intervention fields of TO 10, ETC not included

Intervention field	Intervention field code	Share of EU amount
Education infrastructure for school education (primary and general secondary education)	051	45%
Education infrastructure for tertiary education	049	23%
Education infrastructure for vocational education and training and adult learning	050	14%
Infrastructure for early childhood education and care	052	7%
e-Inclusion, e-Accessibility, e-Learning and e-Education services and applications, digital literacy	080	6%
ICT: Other types of ICT infrastructure/large-scale computer resources/equipment (including e-infrastructure, data centres and sensors; also where embedded in other infrastructure such as research facilities, environmental and social infrastructure)	048	3%
Energy efficiency renovation of public infrastructure, demonstration projects and supporting measures	013	2%
Cross-financing under the ERDF	101	Less than 1%
Total		100%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020⁴².

- Resources in TO 10 are focused on a small number of intervention fields. These intervention fields target education infrastructure, e-learning and energy efficiency. They are hence in line with the thematic focus of TO 10 on education, training and vocational training for skills and lifelong learning.
- More than 80% of the funding is spent on three intervention fields that focus on education infrastructure: Intervention field 051, which focuses on primary and secondary education, intervention field 049 which targets tertiary education, and intervention field 050 on vocational education and training. Each of these fields have received between 14% and 45% of the budget.
- Smaller shares of the budget are used for early childhood education (intervention field 052), e-learning (080), ICT infrastructure (048) and energy efficiency (013). Between 2% and 6% fall in these intervention fields.

5.5. Literature review

Other EC services

⁴² <https://cohesiondata.ec.europa.eu/EU-Level/ESIF-2014-2020-categorisation-ERDF-ESF-CF/9fpg-67a4>.

The EU International Cooperation and Development Results Framework (EURF)⁴³ contains a range of indicators, including the following:

- Number of children enrolled in primary education with EU support,
- Number of children enrolled in secondary education with EU support,
- Number of teachers trained with EU support.

In addition, the strategic plan 2016-2020 published by DG Education and Culture⁴⁴ includes a list of indicators that are of interest for TO 10 as:

- Number of students and trainees participating in the programme,
- Number of staff supported by the programme,
- Number of participants with special needs or fewer opportunities supported by the programme,
- Percent of organisations that have developed/adapted innovative methods and/or materials, improved capacity etc.,
- Number of projects addressed to children, young people and under-represented groups and the estimated number of people reached.

OECD

The OECD indicator series 'Education at a Glance'⁴⁵ contains several indicators such as:

- Percentage of students with computers available to use,
- Percentage of students with internet access in the classroom,
- Percentage of students using computers to practice skills and procedures at least sometimes,
- The average class size by education level. This piece of information is relevant to perform a plausibility check of the values of the proposed output indicators. For instance, in the case of primary education, OECD average is 21 students per class, while in the case of lower secondary education 23.

World Bank

The World Bank defines core sector indicators for the field of education⁴⁶. These include:

- Number of additional qualified primary teachers resulting from project interventions,
- Number of additional classrooms built or rehabilitated at the primary level from project interventions.

⁴³ Capacity4dev (2018).

⁴⁴ European Commission (2016b).

⁴⁵ OECD (2018a).

⁴⁶ World Bank (2013).

5.6. Candidate indicators for the post-2020 period

The candidate indicators proposed here include input, process, output and direct result indicators. Input indicators are defined as for TO 2.

A. Process indicators

Four groups of process indicators are proposed as in the other TOs. One indicator is added to the list to measure the number of educational institutions receiving support (an additional 'type of beneficiary'-indicator).

B. Output indicators

Gaps identified

- The use of common indicators under TO 10 is rather low.
- Only five different common indicators have been used. This is a low number compared to other TOs. Among the five indicators, CO35 on the 'capacity of supported childcare or education' is the most used.

Key outputs emerging from the analysis

- Supported (renovated/upgraded) infrastructure, measured in terms of number of buildings, surface area (square meters) or capacity.
- Procured equipment for educational purposes.

Proposed output indicators

- An additional new indicator is proposed to measure the nominal value of purchased educational equipment. This could include investments in computers, teaching/learning software, laboratories, books, musical instruments, sport equipment or other materials, tools, models or equipment used for teaching purposes.
- Existing common output indicator CO35 is confirmed in a refined version. Rather than measuring the total capacity of childcare and educational infrastructure, as under the 2014-2020 period, it measures the increased capacity of early childcare facilities and the capacity of primary, secondary, post-secondary and tertiary educational institutions separately. The division between the childcare and educational facilities is based on the use of ISCED codes.
- The new indicator measuring new or improved online services provided by public administrations proposed under TO 2 has been confirmed in the case of e-governance interventions in the relevant policy fields of this thematic objective (e.g. e-education). The indicator should be combined with the appropriate project-based process indicator specifying the IP (P.16).

Table 37 Proposed output indicators - TO 10

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP
O.63 Capacity of built / renewed childcare infrastructure (ISCED-0) (children)	Refined (CO35)	052	ERDF: 10
O.64 Capacity of built / renewed educational infrastructure (ISCED-1 to ISCED-8) (people)	Refined (CO35)	049, 050, 051, 115, 116, 117, 118	ERDF: 10
O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)	New	Various	Combined with appropriate process indicator
O.65 Nominal value of purchased/renovated educational equipment (euro)	New, based on programme-specific indicators	049, 050, 051, 115, 116, 117, 118	ERDF: 10

C. Direct result indicators



Gaps identified: lack of indicators measuring direct results.

Key direct results: Number of pupils/students / people using supported infrastructure.

Proposed direct result indicators:

- Two new indicators are proposed to fill this gap and measure the number of persons who benefit from investments under TO 10. One of these indicators measures the number of persons who are taking part in courses, seminars or classes in supported educational facilities. Another indicator measures the number of children who are cared for in supported child care centres. This indicator has been introduced in TO 9.
- The feasibility of both indicators is medium because they require additional information on the use of supported facilities after project completion.

Table 38 Proposed direct result indicators - TO 10

Direct result indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)	Feasibility
D.49 Children using supported child care (ISCED-0) educational infrastructure (total annual number)	New, based on literature review and programme-specific indicators	052	ERDF: 10	Medium 
D.50 People using supported educational infrastructure (ISCED-1 to ISCED-8) (total annual number)	New, based on literature review and programme-specific indicators	049, 050, 051, 052	ERDF: 10	Medium 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility.

6. CANDIDATE POST-2020 TO 11 COMMON INDICATORS

6.1. Budget allocation and investment priorities

Thematic Objective 11 seeks to enhance institutional capacity of public authorities and stakeholders and efficient public administration. According to EC Cohesion data⁴⁷, the total budget planned for TO 11 is around 6.4 billion Euro, with 5.0 billion Euro as EU contribution. Around 73% of the total budget (national and EU contribution) is covered by ESF and 27% by ERDF. TO 11 represents around 0.6% of the total (national and EU) ERDF budget.

Of the 1.7 billion Euro covered by ERDF for TO 11, around 0.4 billion Euro (21%) come from national sources and around 1.4 billion Euro from the EU (79%).

Regulation (EU) 1301/2013 on the European Regional Development Fund defines one investment priority for TO 11 'enhancing institutional capacity of public authorities and stakeholders and efficient public administration through actions to strengthen the institutional capacity and the efficiency of public administrations and public services related to the implementation of the ERDF, and in support of actions under the ESF to strengthen the institutional capacity and the efficiency of public administration'.

Regulation (EU) 1300/2013 on the Cohesion Fund defines a similar investment priority for TO 11 'enhancing institutional capacity of public authorities and stakeholders and efficient public administration through actions to strengthen the institutional capacity and the efficiency of public administrations and public services related to the implementation of the Cohesion Fund'.

⁴⁷ Data downloaded 19 April 2018 from the open cohesion data platform.

6.2. Gap analysis

Table 39 shows that common output indicators have not been used.

Table 39 Use of output indicators – TO 11 (ETC not included)

IP	Programme-specific	Common	Total	Share common / total
11	21	0	21	0%
Total	21	0	21	0%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

6.3. Consultation findings

2014-2020 common indicators

Common indicators have not been used.

2014-2020 programme-specific output indicators

Insights into the programme-specific indicators which MAs used to document processes, outputs and results of their activities are very valuable for TO 11. The two indicators used by consulted programme authorities are:

- Area of land registered in the Integrated Cadastre and Land Register System (hectares), and
- Number of territorial planning documents.

Post-2020 direct result indicators⁴⁸

Eight potential new direct result indicators were shown to MA for consultation, and three MAs commented on them. The eight indicators were:

- Number of users of open data platforms,
- Number of entities using new methods, protocols, procedures or databases that were developed/supported during the project,
- Number of staff gaining a qualification,
- Administrative delays (Number of projects supported by the administration which are finalized after the foreseen deadline),
- Average time to perform project assessment in competitive calls,
- Number of administrations that implemented reorganisation plans on the basis of functional reviews,
- Number of services delivered through a new channel (e.g. online),
- Number of entities that regularly assess client satisfaction.

Some of the indicators listed above are considered relevant by MAs consulted. They are 'Average time to perform project assessment in competitive calls', 'Number of

⁴⁸ For TO 11 the survey was not foreseen by the ToR, however the contractor decided to conduct some additional interviews in order to collect qualitative information.

administrations that implemented reorganisation plans on the basis of functional reviews', 'Number of entities using new methods, protocols, procedures or databases that were developed/supported during the project', 'Number of services delivered through a new channel (e.g. online)'.

6.4. Allocation of planned resources

Table 40 shows the intervention fields of TO 11, which amount to almost 100% of the total expenditure planned by CF and ERDF programmes. As with previous TOs, intervention fields from 121 to 123 in Annex I of EU reg. 215/2014 have been excluded because they relate to technical assistance. In addition, ETC programmes and priority axes with more than one TO are not included.

Table 40 Intervention fields of TO 11, ETC not included

Intervention field	Intervention field code	TO 11 share of EU amount
Institutional capacity of public administrations and public services related to implementation of the ERDF or actions supporting ESF institutional capacity initiatives	096	84%
e-Government services and applications (including e-Procurement, ICT measures supporting the reform of public administration, cyber-security, trust and privacy measures, e-Justice and e-Democracy)	078	16%
Total		100%

Source: Own elaboration of DG Regional and Urban Policy, European Commission, SFC 2014-2020.

The entire budget of TO 11 is focused on two single intervention fields: The largest share of the budget (84%) is used for intervention field 096 'Institutional capacity of public administrations and public services'. The remainder of the funds goes to intervention field 078 'e-Government services and applications'.

6.5. Literature review

Other EC services

DG Employment, Social Affairs and Inclusion has published a guidance document on indicators of public administration capacity building⁴⁹ that proposes a wealth of indicators to measure output and results of interventions. Only a few indicators that have been deemed most relevant can be mentioned here:

- Number of projects targeting public administration or public services,
- Number of public bodies/departments involved in projects,
- Number of staff who gained a qualification,
- Number of institutions that successfully implemented the outputs (structures/systems/tools/procedures/methods) of the project,
- Number of units that assess periodically client satisfaction 1 year after full implementation of the tool,
- Number of administrations that implemented reorganisation plans on the basis of functional reviews.

In addition, the EU International Cooperation and Development Results Framework (EURF)⁵⁰ contains a range of indicators to monitor impact and results of EU aid. Some of these indicators measure good governance, including the following:

- Number of individuals directly benefiting from Justice, Rule of Law and Security Sector Reform programmes funded by EU external assistance programmes,
- Number of people directly benefiting from legal aid programmes supported by the EU.

OECD

The OECD indicator series 'Government at a Glance – 2017 edition'⁵¹ contains several indicators that are of relevance for this project. Most notably, it includes the following:

- Time needed to resolve administrative cases,
- Citizen satisfaction with the judicial system,
- Individuals using the internet for sending filled forms via public authorities (last 12 months).

⁴⁹ European Commission (2014b).

⁵⁰ Capacity4dev (2018).

⁵¹ OECD (2018b).

World Bank

The World Bank defines a few core sector indicators for ICT that can be of relevance for TO 11⁵². These include:

- Electronic transactions of public services (%),
- Average processing time for public services (hours),
- User perception of quality of public services (%),
- Costs to user for public services (US\$).

United Nations

The United Nations Development Programme suggests a list of indicators to measure change in institutional performance, adaptability and stability.⁵³ These include:

- Percent of people who have access to the service,
- Percent of users who are satisfied with quality of services,
- Time to delivery or completion of activity,
- Number of improvement measures implemented based on systematic review/evaluation of procedures/processes.

⁵² World Bank (2013).

⁵³ United Nations Development Programme (2011).

6.6. Candidate indicators for the post-2020 period

The candidate indicators proposed here include input, process, output and direct result indicators. Input indicators are defined as for TO 8.

A. Process indicators

Four groups of process indicators are proposed as in the other TOs. Project-based process indicators seem the most suitable for TO 11.

B. Output indicators

Gaps identified: common output indicators have not been used.

Key outputs: related to administrative capacity.

Proposed output indicators

- A new indicator is proposed to measure the number of new or upgraded public services that are partly or completely online. This indicator has already been introduced for TO 2, TO 9 and TO 10. Within TO 11, the indicator will be particularly relevant to measure advancements in e-government, but potentially also in other sectors such as e-health, e-justice or e-inclusion. The indicator should be combined with the appropriate project-based process indicator specifying the IP (P.16).
- An additional new indicator is proposed to measure the number of staff members who could develop their skills and competences by participating in training programmes.
- Another indicator is introduced to measure improvements in equipment, processes or organisation of public administrations. This indicator measures the nominal value of systems, tools, services, structures or equipment that were purchased, developed or improved with ERDF or CF funding.

Table 41 Proposed output indicators TO 11

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP
O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)	New	Various	ERDF and CF: 11
O.66 Staff members participating in training programmes (number)	New, based on literature review	096, 119	ERDF and CF: 11
O.67 Nominal value of purchased, developed or improved systems, services, structures, tools and equipment (euro)	New, based on literature review	096, 119	ERDF and CF: 11

C. Direct result indicators






Gaps identified: lack of indicators measuring direct results.

Key direct results: related to increased capacity of the administration.

Proposed direct result indicators: During the 2014-2020 period, common indicators have not been used at all under TO 11. New common direct result indicators are proposed to fill this gap.

- Two new indicators measure the number of individuals and enterprises who interact online with supported public authorities. These indicators have already been introduced for TO 2.
- An additional indicator focuses on staff in public administration entities who have gained a qualification by participating in courses, seminars or similar educational events. Its feasibility is high because it is monitored based on information already available at project completion.
- Another indicator measures the number of bodies who use systems, services, structures, tools or equipment that were bought, developed or improved with project funding. Its feasibility is medium, because it requires information after project completion about the use of systems and services.
- Furthermore, an indicator is formulated based on consultation findings to capture the average time to perform project assessment. Its feasibility is high, because it relies on information already available at MA level.

Table 42 Proposed direct result indicators – TO 11

Direct result indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)	Feasibility
D.33 Individuals interacting online with supported public authorities (number)	New	119, 120	ERDF and CF: 11, with appropriate process indicator	Medium 
D.34 Enterprises interacting online with supported public authorities (number)	New	119, 120	ERDF and CF: 11, with appropriate process indicator	Medium 
D.51 Staff gaining a qualification (number)	New, based on literature review	119, 120	ERDF and CF: 11	High 
D.52 Entities using purchased, developed or improved systems, services, structures, tools and equipment Identification	New, based on literature review	119, 120	ERDF and CF: 11	Medium 
D.53 Average time to perform project assessment (days)	New, based on literature review and consultation	119, 120	ERDF and CF: 11	High 

Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility.

7. ANNEXES

7.1. Fiches of candidate process indicators

Four groups of process indicators are proposed: the type of beneficiaries, their characteristics, the form of finance and the number of projects.

Table 43 Overview of proposed process indicators for all TOs

Type	Process indicator (measurement unit)	Continuity with 2014-2020	TO (mainly)
Type of beneficiaries	P.1 Enterprises receiving support (number)	Refined (CO01)	2, 7, 8, 9, 10, 11
	P.2 NGOs receiving support (number)	New	2, 7, 8, 9, 10, 11
	P.3 New enterprises receiving support (number)	Existing (CO05)	2, 7, 8, 9, 10, 11
	P.4 Research institutions receiving support (number)	New (based on programme-specific indicators, CO26, which implicitly refers to research institutions)	2, 7, 8, 9, 10, 11
	P.5 Local public authorities (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11
	P.6 Sub-national public authorities (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11
	P.7 National public authorities (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11
	P.17 Educational institutions receiving support (number)	New (based on programme-specific indicators)	10
Characteristics of beneficiaries	P.8 Micro enterprises receiving support (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11
	P.9 Small enterprises receiving support (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11
	P.10 Medium enterprises receiving support (number)	New (based on programme-specific indicator, this information is usually available during programme implementation)	2, 7, 8, 9, 10, 11

Type	Process indicator (measurement unit)	Continuity with 2014-2020	TO (mainly)
	support (number)		11
	P.11 Large enterprises receiving support (number)		2, 7, 8, 9, 10, 11
	P.12 Social enterprises receiving support (number)	New (programme-specific indicator)	2, 7, 8, 9, 10, 11
Form of finance and type of support	P.13 Enterprises supported with grants (number)	Existing (CO02)	2, 7, 8, 9, 10, 11
	P.14 Enterprises supported with financial instruments (number)	Slightly refined in the title based on CO03	2, 7, 8, 9, 10, 11
	P.15 Enterprises receiving non-financial support	Existing (CO04)	2, 7, 8, 9, 10, 11
Projects	P.16 Number of projects with reference to the IP (e.g. P.16.IPx, P.16.Ipy, etc.)	New (this type of information is usually available for MAs)	2, 7, 8, 9, 10, 11

This annex provides the fiche of P.17. The other indicators have already been described in Part I of the study.

P.17 Educational institutions receiving support

Identification	
Name	P.17 Educational institutions receiving support.
Definition	It counts the number of educational institutions receiving support (ISCED-0 to ISCED-8).
Measurement unit	Number of educational institutions.
Thematic coverage	
Thematic objectives	TO, 10.
Investment priorities	All.
Intervention field	/
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	MA directly based on the list of beneficiaries.
Method of calculation	Count the number of educational institutions receiving support. The VAT (or other key variable) should be collected to make possible verifications on double counting and because the value to be sent to EC is calculated considering double counting.
Indicator values reported to the Commission	Value derived from project fiches.
Aggregation	Automatic from programme value
Source	MA monitoring database (list of beneficiaries).
Timing	At project completion.
Link with other indicators	O.63, O.64, O.65, D.49, D.50.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on programme-specific indicators.
Use in other EC services	
/	

According to the International Standard Classification of Education (ISCED) 2011, this indicator should include institutions providing early childhood education (ISCED 0), primary education (ISCED 1), secondary education (ISCED 2 and 3), post-secondary education (ISCED 4) and tertiary education (ISCED 5 to 8). Definitions are provided by Eurostat (2016).

7.2. Fiches of candidate output indicators

Table 44 shows the output indicators proposed, stressing the continuity with the 2014-2020 period, the indicative intervention fields and IPs. This annex provides the indicator fiches which are not in Part I of the study.

Table 44 Overview of proposed common output indicators

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
O.9 Railway: Total length of newly built railway line (km)	Existing (CO11)	026, 027	ERDF: 7b
O.10 Railway: Total length of reconstructed or upgraded railway line (km)	Existing (CO12)	026, 027	ERDF: 7b
O.11 Total length of new or improved environmentally-friendly (including low-noise) and low-carbon transport lines (km)	Existing and slightly refined (CO15)	All	ERDF: 7c CF: 7ii
O.20 Total surface area of rehabilitated land (hectares)	Existing (CO22)	089	ERDF: 8b, 9b, 9d
O.29 Public or commercial buildings newly built or renovated in urban areas (square metres)	Existing (CO39)	Various	ERDF: 8b, 9b, 9d
O.42 Additional households with broadband access of at least 100 Mbps	Refined (CO10)	045, 047	046, ERDF: 2a
O.43 Roads: Total length of newly built roads (km)	Existing (CO13)	031	ERDF: 7b
O.44 Roads: Total length of newly built roads, of which: TEN-T (km)	Existing (CO13a)	028, 033	029, ERDF: 7a CF: 7i
O.45 Roads: Total length of reconstructed or upgraded roads (km)	Existing (CO14)	031	ERDF: 7b
O.46 Roads: Total length of reconstructed or upgraded roads, of which: TEN-T (km)	Existing (CO14a)	028, 033	029, ERDF: 7a CF: 7i
O.47 Railway: Total length of reconstructed or upgraded railway line, of which: TEN-T (km)	Existing (CO12a)	024, 027	025, ERDF: 7a CF: 7i
O.48 Railway: Total length of newly built railway line, of which: TEN-T (km)	Existing (CO11a)	024, 027	025, ERDF: 7a CF: 7i
O.49 Total length of new or improved inland waterways (km)	Existing (CO16)	039, 042	ERDF: 7c CF: 7iii

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
O.56 Additional enterprises with broadband access of at least 100 Mbps	Existing and refined (CO10)	045, 046, 047	ERDF: 2a
O.60 Rehabilitated housing units (number)	Refined (CO40)	054	ERDF: 9b, 9d
O.63 Capacity of built / renewed / equipped childcare infrastructure (ISCED-0) (children)	Refined (CO35)	052, 115	ERDF: 9a, 9b, 10
O.64 Capacity of built / renewed educational infrastructure (ISCED-1 to ISCED-8) (people)	Refined (CO35)	049, 050, 051, 115, 116, 117, 118	ERDF: 10
O.68 Population living in areas with integrated urban development strategies	Existing and refined (CO37)	Various	ERDF: 9b, 9d
O.4 Nominal value of purchased enterprise infrastructure (euro)	New, based on programme-specific output indicators	073, 113	ERDF: 9c
O.5 Nominal value of purchased enterprise equipment (euro)	New, based on programme-specific output indicators	073, 113	ERDF: 9c
O.6 Nominal value of purchased services supporting incubation, entrepreneurship and start-up (euro)	New, based on programme-specific output indicators and literature review	067, 104, 106	ERDF: 8a, 8c
O.7 Renewed / equipped business incubators (number)	New, based on programme-specific output indicators and the definition of business incubators of ECA (2014)	067	ERDF: 8a
O.8 Renewed business incubators (square metres)	New, based on programme-specific output indicators and literature review and the definition of business incubators of ECA (2014)	067	ERDF: 8a
O.17 Low-emission public transport vehicles purchased or refitted (number)	New, based on programme-specific output indicators	024, 025, 026, 027	ERDF: 7a, 7c CF: 7i, 7ii
O.19 Purchased railway vehicles (number)	New, based on programme-specific output indicators	024, 025, 026, 027	ERDF: 7a, 7c CF: 7i, 7ii
O.26 Carrying capacity of low carbon transport vehicles (total passengers)	New, based on programme-specific output indicators	024, 025, 026, 027	ERDF: 7a, 7c CF: 7i, 7ii
O.36 New or upgraded public access points connected to internet	New	046, 047	ERDF: 2a
O.37 Number of training	New	078	ERDF: 2a

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
programmes supporting safe usage of Internet (including e-services) (number)			
O.38 Number of new or upgraded data centres (number)	New	048	ERDF: 2b
O.39 Number of new applications using open data (number)	New	078, 079, 082	ERDF: 2b
O.40 Number of technological platforms created for collaborative innovation and training (number)	New	046, 047, 048, 082	ERDF: 2b
O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion) (number)	New	Various	ERDF: 2c, 9, 10, 11 CF: 11.
O.50 Number of developed or reconstructed multimodal freight nodes (number)	New	All	ERDF: 7b, 7c, 7d CF: 7ii, 7iii
O.51 Number of eliminated black spots on roads connecting regional centres to TEN-T network (number)	New	030	ERDF: 7b
O.52 Number of developed / upgraded passenger transport intermodal terminals (number)	New, based on programme-specific indicators	All	ERDF: 7b, 7c CF: 7ii
O.53 Number of developed / improved transport management systems to improve safety and effectiveness of transport (ITS) (km)	New, based on literature review	044	ERDF: 7c CF: 7ii
O.54 Number of newly developed or reconstructed ports of which TEN-T (km)	New, based on programme-specific indicators	039	ERDF: 7a, 7c CF: 7i
O.55 Number of developed / upgraded airports of which TEN-T (number)	New, based on programme-specific indicators	037	ERDF: 7a, 7c CF: 7i, 7ii.
O.57 Total length of railways equipped with ERTMS (number)	New, based on literature review	024, 025, 026, 027	ERDF: 7d CF: 7iii
O.58 Total length of new	New, based on programme-	005, 007,	ERDF: 7e

Output indicators (measurement unit)	Continuity with 2014-2020	Intervention field	IP (mainly)
/ upgraded energy distribution networks (km)	specific output indicators	008	
O.59 Built / renewed employment service infrastructure (square metres)	New	102, 103, 105, 108	ERDF: 8d
O.61 Capacity of built / renewed / equipped health care infrastructure (Number of beds/patients)	New, based on programme-specific indicators and literature review	053	ERDF: 9a
O.62 Capacity of built / renewed / equipped elderly care and long-term care infrastructure (Number of beds/patients)	New, based on programme-specific indicators and literature review	055	ERDF: 9a
O.65 Nominal value of purchased/renovated educational equipment (euro)	New, based on programme-specific indicators	049, 050, 051, 115, 116, 117, 118	ERDF: 10
O.66 Staff members participating in training programmes (number)	New, based on literature review	096, 119	ERDF and CF: 11
O.67 Nominal value of purchased, developed or improved systems, services, structures, tools and equipment (euro)	New, based on literature review	096, 119	ERDF and CF: 11

Existing and refined indicators

O.42 Additional households with broadband access of at least 100 Mbps

Identification	
Name	O.42 Additional households with broadband access of at least 100 Mbps.
Definition	Measures the households with internet access with a download speed of at least 100 Mbps and which before only had more limited access or did not have access at all. The capacity to access must be a direct consequence of the support. In the Eurostat glossary for social statistics, a household is defined as a housekeeping unit or, operationally, as a social unit with common arrangements, sharing household expenses or daily needs and living in a shared common residence. 'A household includes either one person living alone or a group of people, not necessarily related, living at the same address with common housekeeping, i.e. sharing at least one meal per day or sharing a living or sitting room. Collective households or institutional households (as opposed to private households) are, for instance: hospitals, old people's homes, residential homes, prisons, military barracks, religious institutions, boarding houses and workers' hostels'.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF 2a.
Intervention field	045, 046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum. See indicator D.16 for further details on the measurement of households (Part I of the study).
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.30.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined CO10.
Use in 2014-2020	No.
Use in other EC services	
DESI (Digital Economy and Society Index). The definition of Eurostat of household has been taken as a reference ⁵⁴ .	

⁵⁴ See http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Household_-_social_statistics.

O.43 Roads: Total length of newly built roads

Identification	
Name	O.43 Roads: Total length of newly built roads,
Definition	Measures the length of newly build roads.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7b.
Intervention field	031.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	O.44, D.36, D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO13).
Use in 2014-2020	TO 7.
Use in other EC services	
/	

O.44 Roads: Total length of newly built roads, of which TEN-T

Identification	
Name	O.44 Roads: Total length of newly built roads, of which TEN-T.
Definition	Measures the length of newly build roads, of which TEN-T.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7a CF 7i.
Intervention field	028, 029, 033.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	O.43, D.36, D.37, D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO13a).
Use in 2014-2020	TO 7.
Use in other EC services	
/.	

O.45 Roads: Total length of reconstructed or upgraded roads

Identification	
Name	O.45 Roads: Total length of reconstructed or upgraded roads.
Definition	Measures the length of reconstructed roads.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7b.
Intervention field	031.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	O.46, D.36, D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO14).
Use in 2014-2020	TO 7.
Use in other EC services	
/	

O.46 Roads: Total length of reconstructed or upgraded roads, of which TEN-T

Identification	
Name	O.46 Roads: Total length of reconstructed or upgraded roads, of which TEN-T.
Definition	Measures the length of reconstructed roads, of which TEN-T.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7a CF 7i.
Intervention field	028, 029, 033.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	O.45, D.36, D.37, D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO14a).
Use in 2014-2020	TO 7.
Use in other EC services	
/	

O.47 Railway: Total length of reconstructed or upgraded railway line, of which TEN-T

Identification	
Name	O.47 Railway: Total length of reconstructed or upgraded railway line, of which TEN-T.
Definition	Measures the length of reconstructed or upgraded (for quality or capacity) railway line., of which TEN-T. Signalling systems are excluded as they distort the values.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7a CF 7i.
Intervention field	024,025, 027
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting
Timing	At project completion.
Link with other indicators	O.10, D.35, D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO12a).
Use in 2014-2020	TO 7.
Use in other EC services	
//	

O.48 Railway: Total length of newly build railway line, of which TEN-T

Identification	
Name	O.48 Railway: Total length of newly build railway line, of which TEN-T.
Definition	Measures the length of new railway constructed, where no railroad existed before, of which TEN-T.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7a CF 7i.
Intervention field	024, 025, 027.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	O.9, D.35, D.37, D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO11a).
Use in 2014-2020	TO 7.
Use in other EC services	
/	

O.49 Total length of new or improved inland waterways

Identification	
Name	O.49 Total length of new or improved inland waterways.
Definition	Measures the length of newly build or improved waterways.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7
Investment priorities	ERDF: 7c CF 7ii.
Intervention field	039, 042.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	MA monitoring system / Project reporting.
Timing	At project completion.
Link with other indicators	D.39.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing (CO16).
Use in 2014-2020	TO 7
Use in other EC services	
Similar to DG Move indicator SO1, Indicator 4.	

O.56 Additional enterprises with broadband access of at least 100 Mbps

Identification	
Name	O.56 Additional enterprises with broadband access of at least 100 Mbps
Definition	Measures the number of enterprises with internet access with a download speed of at least 100 Mbps and which before only had more limited access or did not have access at all. The capacity to access must be a direct consequence of the support.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	045, 046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.31.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined (CO10).
Use in 2014-2020	No.
Use in other EC services	
DESI (Digital Economy and Society Index).	

O.60 Rehabilitated housing units

Identification	
Name	O.60 Rehabilitated housing units.
Definition	Measures the number of renovated or newly developed housing units in rural and urban residential areas. A housing unit is here understood as a self-contained section which is occupied or intended for occupancy as separate living quarters in a building. Separate living quarters can be accessed directly from the outside of the building or through a common hall.
Measurement unit	Number of units.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9b, 9d.
Intervention field	054.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the number of housing units that were developed or renovated with project funding.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.45.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined (CO40).
Use in 2014-2020	ERDF: 9a, 9b.
Use in other EC services	
A similar indicator is used by the European Investment Bank.	

O.63 Capacity of built/renewed childcare educational infrastructure (ISCED-0)

Identification	
Name	O.63 Capacity of built/renewed/equipped childcare educational infrastructure (ISCED-0).
Definition	Measures the capacity of pre-school childcare centres (ISECD-0) that were supported with project funding. Capacity is measured as the maximum number of children that can be hosted, per year in supported child care infrastructure. It does not measure the actual number of users.
Measurement unit	Number of children.
Thematic coverage	
Thematic objectives	TO 9, 10.
Investment priorities	ERDF: 9a, 9b, 10
Intervention field	052, 115.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the number of places (in terms of maximum number of children who can be hosted) available in supported pre-school childcare centres (ISCED-0), reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	P.17, O.65, D.49.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined (CO35).
Use in 2014-2020	ERDF: 9a, 9b, 10.
Use in other EC services	
/	

O.64 Capacity of built/renewed educational infrastructure (ISCED-1 to ISCED-8)

Identification	
Name	O.64 Capacity of built/renewed educational infrastructure (ISCED-1 to ISCED-8).
Definition	Measures the capacity of educational institutions and facilities (ISCED-1 to ISCED-8) that were supported with project funding. Capacity is measured as the maximum number of students and participants who can potentially use the supported institution in one year. It does not measure the actual number of users. The capacity of childcare centres (ISCED-0) should not be included here, since it is measured by indicator O.63.
Measurement unit	Number of people.
Thematic coverage	
Thematic objectives	TO 10.
Investment priorities	ERDF: 10
Intervention field	049, 050, 051, 115, 116, 117, 118.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the number of places (in terms of maximum number of persons) available in supported educational facilities (ISCED-1 to ISCED-8), reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	P.17, O.65, D.50.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Refined (CO35).
Use in 2014-2020	ERDF: 10.
Use in other EC services	
/	

O.68 Population living in areas with integrated urban development strategies

Identification	
Name	O.68 Population living in areas with integrated urban development strategies.
Definition	Measures the number of residents who are living in areas with integrated urban development strategies.
Measurement unit	Population.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9b, 9d.
Intervention field	089, 094, 095, 097, 114.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	MA can use local population registers as a source.
Method of calculation	Sum of inhabitants in supported areas.
Indicator values reported to the Commission	Programme level values.
Aggregation	Aggregation of programme values.
Source	Local population registers.
Timing	At project completion.
Link with other indicators	O.20, O.29.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Refined (CO37).
Use in 2014-2020	8b, 9a, 9b.
Use in other EC services	
/	

New indicators

O.36 New or upgraded public access points connected to internet

Identification	
Name	O.36 New or upgraded public access points connected to internet.
Definition	Counts the number of public access points connected to internet that are available at least 8 hours, 5 days a week.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.37 Number of training programmes supporting safe usage of internet (including e-services)

Identification	
Name	O.37 Number of training programmes supporting safe usage of internet (including e-services).
Definition	Measures the number of training programmes which aims at improving internet usage skills mostly in specific target groups that are most vulnerable (seniors, people with lower level of education etc.).
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	078.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.38 Number of new or upgraded data centres

Identification	
Name	O.38 Number of new or upgraded data centres
Definition	Counts the number of new or upgraded data centres.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2b.
Intervention field	048.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.39 Number of new applications using open data

Identification	
Name	O.39 Number of new applications using open data.
Definition	Measures the number of new applications created by private enterprises based on provided open datasets.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2b.
Intervention field	078, 079, 082.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.40 Number of technological platforms created for collaborative innovation and training

Identification	
Name	O.40 Number of technological platforms created for collaborative innovation and training.
Definition	Measures the number of technological platforms such as clusters, associations etc. created for collaborative innovation and training with the focus on ICT development.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2b.
Intervention field	046, 047, 048, 082.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators
Use in other EC services	
/	

O.41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)

Identification	
Name	O.40 41 Number of new or improved online services provided by public administrations (e-health, e-government, e-education, e-justice, e-culture, e-inclusion).
Definition	Measure the number of new or upgraded public services provided online regarding e-health, e-government, e-education, e-justice, e-culture, e-inclusion.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2, TO 9, TO 10, TO 11.
Investment priorities	ERDF: 2c, investment priorities of TO 9, 10, 11 CF: 11.
Intervention field	Various.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.33, D.34.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.50 Number of developed or reconstructed multimodal freight nodes

Identification	
Name	O.50 Number of developed or reconstructed multimodal freight nodes.
Definition	Measures the number of developed or reconstructed multimodal freight nodes.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7b, 7c, 7d CF: 7ii, 7iii.
Intervention field	All.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.38, D.39.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.51 Number of eliminated black spots on roads connecting regional centres to TEN-T network

Identification	
Name	O.51 Number of eliminated black spots on roads connecting regional centres to TEN-T network.
Definition	Number of eliminated black spots on roads connecting regional centres to TEN-T network.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7b.
Intervention field	030.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
Similar to DG Move indicator SO1, Indicator 1.	

O.52 Number of developed or upgraded passenger transport intermodal terminals

Identification	
Name	O.52 Number of developed or upgraded passenger transport intermodal terminals.
Definition	Measures the number of developed or upgraded passenger transport intermodal terminals.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7b, 7c CF: 7ii.
Intervention field	All.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.53 Number of developed or improved transport management systems to improve safety and effectiveness of transport (ITS)

Identification	
Name	O.53 Number of developed or improved transport management systems to improve safety and effectiveness of transport (ITS).
Definition	Measures the number of developed or improved transport management systems to improve safety and effectiveness of transport (ITS).
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7c CF: 7ii.
Intervention field	044.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.54 Number of newly developed or reconstructed ports of which TEN-T

Identification	
Name	O.54 Number of newly developed or reconstructed ports of which TEN-T.
Definition	Measures the number of newly developed or reconstructed ports, of which TEN-T.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7a, 7c CF: 7i, 7ii.
Intervention field	039.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.55 Number of newly developed or upgraded airports of which TEN-T

Identification	
Name	O.55 Number of newly developed or upgraded airports of which TEN-T.
Definition	It measures the number of newly developed or upgraded airports, of which TEN-T.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7a, 7c CF: 7i, 7ii.
Intervention field	037.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	MA reporting system / At project completion.
Link with other indicators	D.40.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.57 Total length of railways equipped with ERTMS

Identification	
Name	O.57 Total length of railways equipped with ERTMS.
Definition	it measures the total length of railways equipped with European Rail Traffic Management System (ERTMS).
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7d CF 7iii.
Intervention field	024, 025, 026, 027.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	MA reporting system / Project reporting.
Timing	At project completion.
Link with other indicators	D.37.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
Similar to DG Move indicator, SO1, Indicator 2.	

O.58 Total length of new or upgraded energy distribution networks

Identification	
Name	O.58 Total length of new or upgraded energy distribution networks.
Definition	Measures the total length of new or upgraded energy distribution networks.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7e.
Intervention field	007, 008.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.48.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.59 Built/renewed employment service infrastructure

Identification	
Name	O.59 Built/renewed/equipped employment service infrastructure.
Definition	This indicator measures the size of supported employment service infrastructure. It includes all infrastructure that were newly created, renewed. Employment services are defined as all services that connect jobseekers with employers.
Measurement unit	Square metres.
Thematic coverage	
Thematic objectives	TO 8.
Investment priorities	ERDF: 8d.
Intervention field	102, 103, 105, 108.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the size of supported employment services (in square metres) that are reported at project level
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.42.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New.
Use in other EC services	
/	

O.61 Capacity of built/renewed/equipped health care infrastructure

Identification	
Name	O.61 Capacity of built / renewed / equipped health care infrastructure.
Definition	Measures the capacity of health care centres that were supported with project funding. The indicator measures the maximum number of people who can potentially be treated or cared for at any moment. The capacity of supported childcare centres (ISCED-0) should not be included, since it is measured by indicator O.63. Capacity can be measured in terms of the number of beds in supported institutions or places for clients/patients in day care facilities. MA can report: one value for beds, one value for patients or both, if it indicates the appropriate measurement unit.
Measurement unit	Number of people and/or number of beds.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a.
Intervention field	053.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the number of places (patients) or beds (capacity) available in supported health care centres, reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.43, D.46, D.47
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on project-specific indicators and literature review.
Use in other EC services	
See European Commission, 2017i, for the performance assessment framework of primary care. A similar indicator has been used by the European Investment Bank (European Investment Bank 2015a, 2015b, 2017).	

O.62 Capacity of built/renewed/equipped elderly care and long-term care infrastructure

Identification	
Name	O.62 Capacity of built/renewed/equipped elderly care and long-term care infrastructure.
Definition	This indicator measures the capacity of elderly care and long-term care centres or institutions that were supported with project funding. Capacity can be measured e.g. in terms of the number of beds in supported institutions or in terms of places for clients/patients in day care facilities. In other words, the indicator measures the maximum number of persons who can potentially be treated or cared for per year. It does not measure the actual number of users. The capacity of supported childcare centres (ISCED-0) should not be included here, since it is measured by indicator O.63. According to Eurostat definition and following International Classification for Health Accounts – Providers of health care (ICHA-HP), <i>residential long-term care facilities comprise establishments primarily engaged in providing residential long-term care that combines nursing, supervisory or other types of care as required by the residents. In these establishments, a significant part of the production process and the care provided is a mix of health and social services, with the health services being largely at the level of nursing care, in combination with personal care services. The medical components of care are, however, much less intensive than those provided in hospitals.</i> Therefore, the indicator regards long-term nursing care facilities (HP.2.1) and other residential long-term care facilities (HP.2.9). On the other hand, beds in hospitals dedicated to long-term care and beds in residential settings such as adapted housing that can be considered as people's home are excluded. MA can report two values one for beds, one for patients or both, if it indicates the appropriate measurement units.
Measurement unit	Number of people and/or number of beds. Places are intended as number of people who can be treated per year.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a.
Intervention field	055.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the number of places or beds (capacity) available in supported elderly care and long-term care centres, reported at project level
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.

Source	Project reporting.
Timing	At project completion.
Link with other indicators	D.44, D.46, D.47.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on project-specific indicators and literature review.
Use in other EC services	
A similar indicator has been used by the European Investment Bank (European Investment Bank 2015a, 2015b, 2017).	

O.65 Nominal value of purchased/renovated educational equipment

Identification	
Name	O.65 Nominal value of purchased/renovated educational equipment.
Definition	This indicator measures the nominal value of all equipment that was bought or renovated for educational purposes with project funding. This could include books, sports equipment, chemical laboratories, computers, music instruments or similar.
Measurement unit	Euro.
Thematic coverage	
Thematic objectives	TO 10.
Investment priorities	ERDF: 10.
Intervention field	049, 050, 051, 115, 116, 117, 118.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum the total costs of all purchased or renovated educational equipment.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.63, O.64.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

O.66 Staff members participating in training programmes

Identification	
Name	O.66 Staff members participating in training programmes.
Definition	This indicator measures the number of staff members working in public authorities or administrations that participate in training programmes, seminars or courses organised with project funding.
Measurement unit	Number of staff members.
Thematic coverage	
Thematic objectives	TO 11.
Investment priorities	ERDF and CF: 11.
Intervention field	096, 119.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum staff members that participate in project-funded training programmes, reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	P.5, P.6, P.7, D.51.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review.
Use in other EC services	
Similar indicators are suggested by DG Employment, Social Affairs and Inclusion.	

O.67 Nominal value of purchased, developed or improved systems, services, structures, tools and equipment

Identification	
Name	O.67 Nominal value of purchased, developed or improved systems, services, structures, tools and equipment.
Definition	This indicator measures the nominal value of all systems, services, structures, tools and equipment that were purchased, developed or improved with project funding in order to enhance institutional capacity of public authorities and stakeholders. This could include for instance resources spent on the purchase of IT systems or tools, the development of quality management systems, the development of online databases or registers or the adaptation of new case management systems.
Measurement unit	Euro.
Thematic coverage	
Thematic objectives	TO 11.
Investment priorities	ERDF and CF: 11.
Intervention field	096, 119.
Fund	ERDF and CF
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum of the total costs of all purchased, developed or systems, services, structures, tools and equipment.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	P.5, P.6, P.7, D.52
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review.
Use in other EC services	
Similar indicators are suggested by DG Employment, Social Affairs and Inclusion.	

Other indicators not included in the proposed list of indicators

Number of new or upgraded public services provided completely online (e-health, e-government, e-education, e-justice, e-culture, e-inclusion)

Identification	
Name	Number of new or upgraded public services provided completely online (e-health, e-government, e-education, e-justice, e-culture, e-inclusion).
Definition	Measure the number of new or upgraded public services provided completely online (e-health, e-government, e-education, e-justice, e-culture, e-inclusion).
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2c.
Intervention field	078, 079, 080, 081.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

Number of eliminated bottlenecks on TEN-T railway lines

Identification	
Name	Number of eliminated bottlenecks on TEN-T railway lines.
Definition	Number of eliminated bottlenecks on TEN-T railway lines.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7d CF 7iii.
Intervention field	024, 025, 027.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Simple aggregation based on programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	No.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, but based on programme-specific indicators.
Use in other EC services	
/	

7.3. Fiches of candidate direct result indicators

The table shows the proposed list of common direct result indicators, some of which are newly developed while others are confirmed existing common indicators. The fiches of direct result indicators D.1 – D.29 have been provided in Part I of the study.

Table 45 Overview of proposed common direct result indicators

Direct result indicators (measurement unit)	Continuity	Intervention field (mainly)	IP (mainly)	Timing
D.1 Private investment matching public support to enterprises (grants) (euro)	Existing (CO06)	073, 113	ERDF: 9c, 9d	Project completion
D.2 Private investment matching public support to enterprises (financial instruments) (euro)	Existing (CO07)	073, 113	ERDF: 9c, 9d	Project completion
D.4 Employment increase in supported enterprises (FTEs)	Existing (CO08)	Various	ERDF: 8a, 8b, 8c, 8d, 9b, 9c, 9d	Project completion
D.21 Estimated GHG emissions (tons of CO2 Equivalent)	Existing and refined (CO34)	All	ERDF: 7e	One year after project completion
D.30 Household subscribing broadband of at least 100 Mbps	Existing and refined (CO10)	045, 046, 047	ERDF: 2a	Project completion
D.31 Enterprises subscribing broadband of at least 100 Mbps	Existing and refined (CO10)	045, 046, 047	ERDF: 2a	Project completion
D.11 Survival rate of supported new firms (in percent)	New, based on literature review, harmonisation with Eurostat	001, 066, 067, 104	ERDF: 8a	Three years after project completion
D.12 Public transport users (passengers)	New	All	ERDF: 7c	One year after project completion
D.24 Visitors to supported cultural and natural heritage sites (total annual number)	New based on literature review and programme-specific indicators	091, 092, 093, 094, 095	ERDF: 8b	One year after project completion
D.32 Supported Enterprises with High levels of Digital Intensity	New	082	ERDF: 2b	Project completion
D.33 Individuals interacting online with supported public authorities	New, based on literature review	078, 079, 080, 081	ERDF: 2c, 11 CF: 11	One year after project completion

Direct result indicators (measurement unit)	Continuity	Intervention field (mainly)	IP (mainly)	Timing
D.34 Enterprises interacting online with supported public authorities	New, based on literature review	078, 079, 080, 081, 082, 119	ERDF: 2c, 11 CF: 11	One year after project completion
D.35 The length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlement agglomerations (km)	New	024, 025, 026, 027	ERDF: 7a CF: 7i	Project completion
D.36 The length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations (km)	New	028, 029, 030, 031, 033	ERDF: 7a CF: 7i	Project completion
D.37 Time savings in the public transport system covered by the supported project (minutes)	New, based on literature review and programme-specific indicators	All	ERDF: 7c	One year after project completion
D.38 Railway freight transport volume (tonnes)	New, based on literature review and programme-specific indicators	024, 025, 026, 027	ERDF: 7c, 7d	One year after project completion
D.39 Waterway freight transport volume (tonnes)	New, based on literature review and programme-specific indicators	041	ERDF: 7c, 7d	One year after project completion
D.40 Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes (number of people)	New	All	ERDF: 7b	Project completion
D.41 Enterprises using the services of supported business incubators and small investment facilities (total annual number)	New	067, 104	ERDF: 8a	One year after project completion
D.42 Job seekers using services of supported employment service infrastructure (total annual number)	New	102, 103, 108	ERDF: 8d	One year after project completion
D.43 People using supported health care infrastructure (total annual number)	New, based on literature review and programme-specific indicators	053	ERDF: 9a	One year after project completion

Direct result indicators (measurement unit)	Continuity	Intervention field (mainly)	IP (mainly)	Timing
annual number)	specific indicators			
D.44 People using supported social care (elderly care and long-term care) infrastructure (total annual number)	New, based on literature review and programme-specific indicators	055	ERDF: 9a	One year after project completion
D.45 People occupying supported housing units (number)	New, based on programme-specific indicators	054	ERDF: 9b, 9d	One year after project completion
D.46 Waiting time to use services provided by supported health or social infrastructure (average number of days)	New, based on literature review	080, 081, 112	ERDF: 9a	One year after project completion
D.47 Average response time of emergency services	New	080, 081, 112	ERDF: 9a	One year after project completion
D.48 Users connected to the new or upgraded network	New, based on programme-specific indicators	005, 007, 008 (mainly under ERDF)	ERDF: 7e	One year after project completion
D.49 Children using supported child care (ISCED-0) educational infrastructure (total annual number)	New, based on literature review and programme-specific indicators	052	ERDF: 9a, 9b, 10	One year after project completion
D.50 People using supported educational infrastructure (ISCED-1 to ISCED-8) (total annual number)	New, based on literature review and programme-specific indicators	049, 050, 051, 052	ERDF: 10	One year after project completion
D.51 Staff gaining a qualification (number)	New, based on literature review	119, 120	ERDF and CF: 11	Project completion
D.52 Entities using purchased, developed or improved systems, services, structures, tools and equipment (number)	New, based on literature review	119, 120	ERDF and CF: 11	One year after project completion
D.53 Average time to perform project assessment (days)	New, based on literature review and consultation	119, 120	ERDF and CF: 11	Yearly

Existing and refined indicators

D.30 Households subscribing broadband of at least 100 Mbps

Identification	
Name	D.30 Households subscribing broadband of at least 100 Mbps
Definition	Number of households subscribing a contract for internet access with a download speed of at least 100 Mbps. In the Eurostat glossary for social statistics, a household is defined as a housekeeping unit or, operationally, as a social unit with common arrangements, sharing household expenses or daily needs and living in a shared common residence. 'A household includes either one person living alone or a group of people, not necessarily related, living at the same address with common housekeeping, i.e. sharing at least one meal per day or sharing a living or sitting room. Collective households or institutional households (as opposed to private households) are, for instance: hospitals, old people's homes, residential homes, prisons, military barracks, religious institutions, boarding houses and workers' hostels'. In the case of private households, the reference to dwellings can be a good proxy to measure the indicator. In the other case, collective household, the reference to household's subscribed contracts to broadband of at least 100 Mbps can be appropriate to measure the indicator.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	045, 046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.42.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined CO10.
Use in 2014-2020	No.
Use in other EC services	
DESI (Digital Economy and Society Index). The definition of Eurostat of household has been taken as a reference ⁵⁵ .	

⁵⁵ See http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Household_-_social_statistics.

D.31 Enterprises subscribing broadband of at least 100 Mbps

Identification	
Name	D.31 Enterprises subscribing broadband of at least 100 Mbps.
Definition	Number of enterprises subscribing a contract for internet access with a download speed of at least 100 Mbps and who before only had more limited access or did not have access at all. The capacity to access must be a direct consequence of the support.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	045, 046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.56.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	Existing and refined CO10.
Use in 2014-2020	No.
Use in other EC services	
DESI (Digital Economy and Society Index).	

New indicators

D.32 Supported enterprises with high levels of Digital Intensity

Identification	
Name	D.32 Supported enterprises with high levels of Digital Intensity
Definition	The Digital Intensity score is based on how many of 12 technologies are used by each enterprise . High levels are attributed to enterprises using at least 7 of the digital technologies: internet use by a majority of the workers; access to ICT specialist skills; fixed broadband speed > 30 Mbps; mobile devices used by more than 20% of employees; a website; sophisticated functions on the website; presence on social media; e-sales for at least 1% of turnover; exploiting B2C opportunities of web sales; paying to advertise on the internet; purchasing cloud computing advanced services; sending e-Invoices. Double counting should be avoided. ⁵⁶ .
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2b.
Intervention field	082.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

⁵⁶ See European Commission 'Digital Agenda Scoreboard key indicators'.

D.33 Individuals interacting online with supported public authorities

Identification	
Name	D.33 Individuals interacting online with supported public authorities
Definition	Measures the individuals that have used the Internet in the last 12 months, for interaction with supported public authorities. It includes obtaining information from public authority's web sites OR downloading official forms OR sending filled in forms).
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2; TO 11.
Investment priorities	ERDF 2c, 11 CF: 11.
Intervention field	078, 079, 080, 081, various.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.41.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.34 Enterprises interacting online with supported public authorities

Identification	
Name	D.34 Enterprises interacting online with supported public authorities
Definition	Measures the enterprises that have used in the last 12 months new digital services and applications developed by supported public authorities. It includes obtaining information from public authority's web sites, downloading official forms, sending filled in forms.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2, TO 11.
Investment priorities	ERDF: 2c, 11.
Intervention field	078, 079, 080, 081, 082.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.41.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.35 Length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlements / agglomerations

Identification	
Name	D.35 Length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlements / agglomerations.
Definition	Measures the length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlement agglomerations. While the output indicator could refer to the km of new line build or reconstructed, the direct result would refer to the fully upgraded corridors due to the project implementation filling the missing gaps in the infrastructure.
Measurement unit	Km.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF 7a, 7b CF 7i.
Intervention field	024, 025, 026, 027.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.9, O.10, O.47, O.48.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.36 Length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlements / agglomerations

Identification	
Name	D.36 Length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlements / agglomerations
Definition	Measures the length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlement agglomerations. While the output indicator could refer to the km of new line build or reconstructed, the direct result would refer to the fully upgraded corridors due to the project implementation filling the missing gaps in the infrastructure.
Measurement unit	Km
Thematic coverage	
Thematic objectives	TO 7
Investment priorities	ERDF: 7a, 7b CF 7i.
Intervention field	028, 029, 030, 031, 033.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	0.43, 0.44, 0.45, 0.46.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.37 Time savings in the public transport system covered by the supported project

Identification	
Name	D.37 Time savings in the public transport system covered by the supported project.
Definition	Measures the time savings after the project in the specific project area.
Measurement unit	Minutes.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7c.
Intervention field	All.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	0.9, 0.10, 0.43, 0.44, 0.45, 0.46, 0.47, 0.48, 0.51, 0.52, 0.53, 0.57.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.38 Railway freight transport volume

Identification	
Name	D.38 Railway freight transport volume.
Definition	Measures the volume of railway freight transport.
Measurement unit	Tonnes.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7c, 7d.
Intervention field	024, 025, 026, 027.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.9, O.10, O.50.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.39 Waterway freight transport volume

Identification	
Name	D.39 Waterway freight transport volume.
Definition	Measures the volume of waterway freight transport.
Measurement unit	Tonnes.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7c, 7d.
Intervention field	024, 025, 026, 027.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.49, O.50.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.40 Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes

Identification	
Name	D.40 Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes.
Definition	Measures the population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7b.
Intervention field	All.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting
Timing	At project completion.
Link with other indicators	0.44, 0.46, 0.48, 0.51, 0.54, 0.55.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.41 Enterprises using the services of supported business incubators and small investment facilities

Identification	
Name	D.41 Enterprises using the services of supported business incubators and small investment facilities
Definition	Measures the number of enterprises that have used the services of supported business incubators and small investment facilities during the first twelve months after project completion (and up to one year after project completion). The indicator should only measure micro-enterprises and self-employed persons. Double counting should be avoided.
Measurement unit	Number of enterprises (total annual number)
Thematic coverage	
Thematic objectives	TO 8
Investment priorities	ERDF: 8a
Intervention field	067, 104
Fund	ERDF
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum of numbers reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.6, O.7, O.8
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New.
Use in 2014-2020	No.
Use in other EC services	
/	

D.42 Job seekers using services of supported employment service infrastructure

Identification	
Name	D.42 Job seekers using services of supported employment service infrastructure.
Definition	Measures the number of job seekers who use the services of supported employment infrastructure. A job seeker is registered with the public employment services.
Measurement unit	Total annual number.
Thematic coverage	
Thematic objectives	TO 8.
Investment priorities	ERDF: 8d.
Intervention field	102, 103, 108.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	The indicator should be estimated by summing the total number of job seekers who used the services of supported employment services during the first twelve months after project completion. Double counting should be considered in the indicator based on the registration code of each job seeker.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.59.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New.
Use in 2014-2020	No.
Use in other EC services	
The EU International Cooperation and Development Results Framework (EURF) uses related indicators. See Guidance document 'Monitoring and Evaluation of European Cohesion Policy – European Social Fund' (European Commission, 2015d).	

D.43 People using supported health care infrastructure

Identification	
Name	D.43 People using supported health care infrastructure.
Definition	Measures the number of persons who use the services of supported health care facilities. The total annual number of clients and patients during the first twelve months after project completion should be reported here. Double counting should be avoided.
Measurement unit	Total annual users.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a
Intervention field	053.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	The indicator should be estimated by summing the total number of persons who use the services of the supported facilities during the first twelve months after project completion.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.61.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review and programme-specific indicators.
Use in 2014-2020	No.
Use in other EC services	
A similar indicator is used the European Investment Bank.	

D.44 People using supported social care (elderly care and long-term care) infrastructure

Identification	
Name	D.44 People using supported social care (elderly care and long-term care) infrastructure.
Definition	Measures the number of persons who use the services of supported elderly care and long-term care facilities. The total annual number of persons during the first twelve months after project completion should be reported here. Double counting should be avoided.
Measurement unit	Total annual number.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a.
Intervention field	055.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	The indicator should be estimated by summing the total number of persons who use the services of the supported facilities during the first twelve months after project completion.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.62.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review and programme-specific indicators.
Use in 2014-2020	No.
Use in other EC services	
A similar indicator is used by the European Investment Bank.	

D.45 People occupying supported housing units

Identification	
Name	D.45 People occupying supported housing units.
Definition	The indicator measures the number of people who live in rehabilitated or newly developed housing units one year after project completion.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9b, 9d.
Intervention field	054.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	MA can use local population registers as a source or project reporting.
Method of calculation	Sum of inhabitants.
Indicator values reported to the Commission	Programme values.
Aggregation	Aggregation of programme values.
Source	Local population registers and project reporting.
Timing	One year after project completion.
Link with other indicators	O.60.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on programme-specific indicators.
Use in 2014-2020	No.
Use in other EC services	
/	

D.46 Waiting time to use services provided by supported health or social infrastructure

Identification	
Name	D.46 Waiting time to use the services provided by supported health or social infrastructure.
Definition	This indicator measures the number of days that patients or clients have to wait before using supported infrastructure. The relevant time period covers all days between the first request of a client or patient to use the infrastructure (via reservation, websites, calls, visits etc.) and the first day of use. The average waiting time should be calculated by taking into consideration all clients/patients that have used the supported infrastructure during the first twelve months after project completion. Persons who have requested to use a supported facility but have not used should not be taken into consideration.
Measurement unit	Average number of days.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a.
Intervention field	080, 081, 112.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	The average waiting time of supported health and social infrastructure should be estimated by summing the waiting time of all patients/clients and then dividing by the number of patients/clients.
Indicator values reported to the Commission	From project to programme level. The programme communicates three values: D.46, its numerator and denominator.
Aggregation	The programme sends three pieces of information: (1) Sum of waiting time (number of days) of all patients (2) Number of patients (3) $D.46 = (1)/(2)$
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.61, O.62.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review.
Use in 2014-2020	No.
Use in other EC services	
/	

D.47 Average response time of emergency services

Identification	
Name	D.47 Average response time of emergency services
Definition	Measures the minutes that patients or clients have to wait for emergency services. The relevant time period covers the minutes between first contact of a patient, relative or witness with emergency services (usually via phone call) and the arrival of help (ambulances etc.) at the place of need. The average response time should be calculated by taking into consideration all emergency calls that have reached supported infrastructure during the first twelve months after project completion. Calls that reached the emergency services but where not about emergencies (e.g. false alarms, misdialled numbers etc.) should not be taken into consideration. The focus of the indicator is on the reduction of response time giving flexibility on the type of emergency service. According to World Health Organisation (WHO), emergency care is an essential part of the health system and serves as the first point of contact ⁵⁷ .
Measurement unit	Average number of minutes.
Thematic coverage	
Thematic objectives	TO 9.
Investment priorities	ERDF: 9a.
Intervention field	080, 081, 112.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Response time to emergency through health services.
Indicator values reported to the Commission	From project to programme.
Aggregation	Average. The programme sends three pieces of information: (1) Sum of response time (number of minutes) of all emergency situations (2) Number of emergency situations $D.47 = (1)/(2)$
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.61, O.62.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New.
Use in 2014-2020	No.
Use in other EC services	
See European Commission (2017h).	

⁵⁷ <http://www.who.int/emergencycare/systems/en/>.

D.48 Users connected to the new or upgraded distribution network

Identification	
Name	D.48 Users connected to the new or upgraded distribution network.
Definition	Counts the users connected to the new or upgraded network.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7e.
Intervention field	005, 007, 008.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.58.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

D.49 Children using supported childcare (ISCED-0) infrastructure

Identification	
Name	D.49 Children using supported child care (ISCED-0) infrastructure
Definition	Measures the number of children who are cared for in the supported child care educational facilities (ISCED-0) during the first twelve months after project completion. Double counting should be avoided.
Measurement unit	Total annual number.
Thematic coverage	
Thematic objectives	TO 9, 10.
Investment priorities	ERDF: 9a, 10.
Intervention field	052.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	The indicator should be estimated by summing the total number of children who use are registered/have a place in supported facilities during the first twelve months after project completion.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	O.63.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review and programme-specific indicators.
Use in 2014-2020	No.
Use in other EC services	
/	

D.50 People using supported educational infrastructure (ISCED-1 to ISCED-8)

Identification	
Name	D.50 People using supported educational infrastructure (ISCED-1 to ISCED-8).
Definition	Measures the number of pupils, students and participants who take part in courses, classes or seminars in the supported educational facilities (ISCED-1 to ISCED-8) during the first twelve months after project completion. Double counting should be avoided, i.e. persons who take part in several classes in the same supported entity should only be counted once.
Measurement unit	Total annual number.
Thematic coverage	
Thematic objectives	TO 10.
Investment priorities	ERDF: 10.
Intervention field	049, 050, 051, 052.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum of students/participants who are taking classes at the supported educational facilities during the first twelve months after project completion.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	0.64
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review and programme-specific indicators.
Use in 2014-2020	No.
Use in other EC services	
A similar indicator is used by the EU International Cooperation and Development Results Framework (EURF).	

D.51 Staff gaining a qualification

Identification	
Name	D.51 Staff gaining a qualification
Definition	Measures the number of staff members working in public administrations who have gained a qualification or degree by participating in capacity-building courses, programmes or seminars.
Measurement unit	Number (of persons).
Thematic coverage	
Thematic objectives	TO 11.
Investment priorities	ERDF and CF: 11.
Intervention field	119, 120.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum of staff members reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	O.66.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review.
Use in 2014-2020	No.
Use in other EC services	
Similar indicators are suggested by DG Employment, Social Affairs and Inclusion.	

D.52 Entities using purchased, developed or improved systems, services, structures, tools and equipment

Identification	
Name	D.52 Entities using purchased, developed or improved systems, services, structures, tools and equipment.
Definition	Measures the number of public administration entities that use systems, services, structures, tools and equipment which were purchased, developed or improved with project funding. This could include for instance IT (information technology) systems or tools, quality management systems, online databases or registers or new case management systems. The number of entities should be measured one year after project completion. The number of entities should be measured at the level of each institution or body. Individual departments, sections or groups within each body or institution should not be counted separately.
Measurement unit	Number of entities
Thematic coverage	
Thematic objectives	TO 11.
Investment priorities	ERDF and CF: 11
Intervention field	119, 120.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum of entities reported at project level.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Aggregation of programme values.
Source	Project reporting.
Timing	One year after project completion.
Link with other indicators	P.5, P.6, P.7, O.67.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review.
Use in 2014-2020	No.
Use in other EC services	
Similar indicators are suggested by DG Employment, Social Affairs and Inclusion.	

D.53 Average time to perform project assessment

Identification	
Name	D.53 Average time to perform project assessment.
Definition	Measures the average time from the project application submission to the signature of the contract or the date of formal rejection of the project.
Measurement unit	Days.
Thematic coverage	
Thematic objectives	TO 11.
Investment priorities	ERDF and CF: 11.
Intervention field	119, 120.
Fund	ERDF and CF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Average of reported at programme level (priority / specific objective level)
Indicator values reported to the Commission	From project to programme level, with a disaggregation at priority or specific objective level. The value is updated yearly.
Aggregation	Aggregation of programme values (average). The value is updated yearly.
Source	Project reporting.
Timing	The value is updated yearly.
Link with other indicators	No.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	New, based on literature review and consultation.
Use in 2014-2020	No.
Use in other EC services	
/	

Other indicators not included in the proposed list of indicators

Increase in standard fixed broadband coverage / availability in the area covered by the project

Identification	
Name	Increase in standard fixed broadband coverage / availability in the area covered by the project.
Definition	Population living in areas served by xDSL, cable (basic and NGA), FTTP or WiMAX networks after project implementation.
Measurement unit	Number.
Thematic coverage	
Thematic objectives	TO 2.
Investment priorities	ERDF: 2a.
Intervention field	045, 046, 047.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
DESI.	

Increase in the transport volumes in combined transport

Identification	
Name	Increase in the transport volumes in combined transport.
Definition	Measures combined freight transport volumes.
Measurement unit	Tonnes.
Thematic coverage	
Thematic objectives	TO 7.
Investment priorities	ERDF: 7c, 7d.
Intervention field	All.
Fund	ERDF.
Robustness, methodology source	
Collection of primary data	Project.
Method of calculation	Sum.
Indicator values reported to the Commission	From project to programme level.
Aggregation	Automatically calculated from the programme level.
Source	Project reporting.
Timing	At project completion.
Link with other indicators	No.
Baseline necessary	Yes.
Continuity 2014-2020/ Simplification	
Relative to 2014-2020	No.
Use in 2014-2020	No.
Use in other EC services	
/	

7.4. Representativeness and findings of the MA consultation

The tables below illustrate the representativeness of the consulted sample of MA and, for each TO, the share of the total EU amount of each programme, and the success rate of the consultation.

The terms of reference of the study establishes thresholds of representativeness of the consulted sample: 71% of the EU amount in TO 2, 81% in TO 7, 90% in TO 8, 76% in TO 9 and 77% in TO 10. The consultation was not required for TO 11.

In terms of EU amount, the sample of consulted programmes represents 59% of the EU amount in TO 2 (83% of the target), 78% in TO 7 (96% of the target), 74% in TO 8 (82% of the target), 64% in TO 9 (85% of the target), 66% in TO 10 (86% of the target).

Table 46 MA consultation – EU amount and OPs

Programme code	Status of the consultation	Country	TO 2	TO 7	TO 8	TO 9	TO 10
2014AT16RFOP001	Conducted	AT	:	:	0.003	0.001	:
2014BE16RFOP001	Not conducted	BE	:	:	:	0.001	:
2014BE16RFOP003	Conducted	BE	:	:	:	:	0.004
2014BG16M1OP001	Conducted	BG	:	0.021	:	:	:
2014BG16RFOP001	Conducted	BG	:	:	:	0.020	0.027
2014CY16M1OP001	Conducted	CY	0.006	0.002	:	0.001	:
2014CZ16M1OP001	Conducted	CZ	:	0.078	:	:	:
2014CZ05M2OP001	Conducted	CZ	:	:	:	:	0.066
2014CZ16RFOP001	Conducted	CZ	0.056	:	:	:	:
2014CZ16RFOP002	Conducted	CZ	0.025	0.024	:	0.087	0.076
2014DE16RFOP003	Conducted	DE	:	:	:	0.008	:
2014DE16RFOP009	Conducted	DE	:	:	:	0.009	:
2014DE16RFOP015	Conducted	DE	:	:	:	0.011	:
2014EE16M3OP001	Conducted	EE	0.006	0.008	0.050	0.021	0.035
2014ES16RFOP013	Conducted	ES	0.010	:	:	:	:
2014ES16RFOP014	Conducted	ES	:	:	:	:	0.019
2014ES16RFOP001	Conducted	ES	0.056	:	:	:	:
2014ES16RFOP002	Conducted	ES	0.012	0.029	:	0.024	:
2014ES16RFOP003	Not conducted	ES	0.021	:	0.013	0.012	0.023
2014FR16M2OP003	Not conducted	FR	0.007	:	:	:	:
2014FR16M2OP008	Not conducted	FR	:	:	:	0.002	:
2014FR16M0OP001	Not conducted	FR	0.004	:	:	:	:
2014FR16M0OP011	Conducted	FR	:	:	0.007	:	:
2014FR16RFOP007	Not conducted	FR	:	0.004	:	:	0.010
2014GR05M2OP001	Conducted	GR	0.013	:	:	:	:
2014GR16M2OP012	Not conducted	GR	:	:	:	0.004	0.009
2014GR16M1OP001	Conducted	GR	:	0.020	:	:	:
2014GR16M2OP001	Conducted	GR	0.039	:	:	:	:
2014HR16M1OP001	Conducted	HR	0.023	0.022	:	0.030	0.043
2014HU05M2OP001	Conducted	HU	:	:	:	0.041	0.067
2014HU16M1OP003	Conducted	HU	:	0.057	:	:	:
2014HU16M0OP001	Conducted	HU	0.051	:	0.029	:	:
2014HU16M2OP001	Conducted	HU	:	:	0.365	0.029	:

Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020 – Part II

Programme code	Status of the consultation	Country	TO 2	TO 7	TO 8	TO 9	TO 10
2014IE16RFOP001	Conducted	IE	0.003	:	:	:	:
2014IT05M2OP001	Conducted	IT	:	:	:	:	0.074
2014IT16M2OP004	Conducted	IT	:	:	:	0.010	:
2014IT16RFOP002	Conducted	IT	:	0.023	:	:	:
2014IT16M2OP002	Conducted	IT	0.010	:	:	0.031	0.012
2014IT16M2OP006	Conducted	IT	:	:	:	:	0.017
2014IT16RFOP003	Not conducted	IT	0.013	:	:	:	:
2014IT16RFOP007	Not conducted	IT	0.020	:	:	0.018	0.018
2014IT16RFOP016	Not conducted	IT	0.019	:	:	0.014	0.020
2014LT16MAOP001	Conducted	LT	0.018	0.020	0.126	0.027	0.033
2014LV16MAOP001	Conducted	LV	0.013	0.020	:	0.016	0.044
2014MT16M1OP001	Conducted	MT	0.002	0.002	:	0.005	0.004
2014NL16RFOP002	Conducted	NL	:	:	0.003	0.002	:
2014PL16M2OP002	Conducted	PL	:	:	:	0.020	:
2014PL16M2OP005	Conducted	PL	:	:	0.018	0.020	:
2014PL16M2OP007	Conducted	PL	0.012	:	:	:	:
2014PL16M2OP009	Conducted	PL	:	:	:	0.012	:
2014PL16M2OP011	Conducted	PL	:	:	:	0.012	0.011
2014PL16M2OP015	Conducted	PL	:	:	:	0.015	0.014
2014PL16M2OP016	Conducted	PL	:	:	0.014	:	:
2014PL16RFOP002	Conducted	PL	0.159	:	:	:	:
2014PL16M1OP001	Conducted	PL	:	0.317	:	0.039	:
2014PL16M2OP001	Conducted	PL	:	:	:	0.014	:
2014PL16M2OP003	Conducted	PL	:	:	:	0.017	:
2014PL16M2OP006	Conducted	PL	:	:	0.024	0.025	:
2014PL16M2OP012	Conducted	PL	:	:	:	0.025	0.013
2014PL16RFOP003	Conducted	PL	:	0.014	:	:	:
2014PT16M2OP004	Conducted	PT	:	:	:	:	0.016
2014PT16M2OP001	Conducted	PT	:	:	0.017	0.013	0.028
2014PT16M2OP002	Not conducted	PT	:	:	0.018	:	0.015
2014PT16M3OP001	Conducted	PT	0.015	0.012	:	:	:
2014RO16M1OP001	Conducted	RO	:	0.089	:	:	:
2014RO16RFOP001	Conducted	RO	0.040	:	:	:	:
2014RO16RFOP002	Conducted	RO	:	0.016	0.030	0.048	0.058
2014SE16M2OP001	Conducted	SE	:	:	:	0.001	:
2014SE16RFOP006	Conducted	SE	0.003	:	:	:	:
2014SE16RFOP008	Conducted	SE	:	0.001	:	:	:
2014SI16MAOP001	Conducted	SI	0.005	0.004	:	0.006	0.003
2014SK05M0OP001	Not conducted	SK	:	:	:	0.020	:
2014SK16M1OP001	Not conducted	SK	0.061	0.053	:	:	:
2014SK16RFOP002	Not conducted	SK	:	:	0.065	0.050	0.042
2014UK16RFOP001	Conducted	UK	0.010	:	:	0.004	:
2014UK16RFOP005	Conducted	UK	:	0.002	0.050	:	:
2014TC16RFCB025	Not conducted	TC	:	:	0.041	:	:
2014TC16RFCB026	Not conducted	TC	:	:	0.008	:	:
2014TC16RFCB045	Not conducted	TC	:	:	0.011	:	:

Development of a system of common indicators for European Regional Development Fund and Cohesion Fund interventions after 2020 – Part II

Programme code	Status of the consultation	Country	TO 2	TO 7	TO 8	TO 9	TO 10
2014TC16RFCB049	Not conducted	TC	:	:	0.014	:	:
2014TC16RFPC001	Not conducted	TC	:	:	:	0.018	:
	(A) Sum of the consulted programmes (total EU Amount) not including ETC programmes ⁵⁸		0.59	0.78	0.74	0.64	0.67
	(B) Target of the EU amount from the terms of reference of the study		0.71	0.81	0.90 ⁵⁹	0.76 ⁶⁰	0.77
	Success rate = A / B (in terms of EU amount)		83%	96%	82%	85%	86%

Source: Own elaborations.

⁵⁸ This calculation does not take into account European Territorial Cooperation Programmes which were excluded by the consultation following EC request.

⁵⁹ The target of EU amount from terms of reference, for TO 8 and TO 9, includes also ETC programmes, excluded by the consultation.

⁶⁰ See above.

Table 47 Number of programme-specific indicators analysed for each IP

TO	Investment priorities																				Total (all TOs)	
	2a	2b	2c	7a	7bc	7c	7d	7e	7i	7ii	7iii	8a	8b	8c	8d	9a	9b	9c	9d	10		11
02	17	12	55																			82
07				7	8	31	5	14	30	27	16											188
08												0	15	0	2							17
09																72	28	0	17			117
10																				70		70
11																					2	2
Total	17	12	55	7	8	31	5	14	30	27	16	0	15	0	2	72	28	0	17	70	2	428

Source: Own elaborations of consultation findings.

Table 48 Number of programmes consulted for each IP

TO	Investment priorities																				Total (all TOs)	
	2a	2b	2c	7a	7b	7c	7d	7e	7i	7ii	7iii	8a	8b	8c	8d	9a	9b	9c	9d	10		11
02	12	9	19																			115
07				4	6	6	4	3	12	6	6											83
08												0	8	0	2							235
09																21	18	0	8			71
10																				19		19
11																					2	2
Total	12	9	19	4	6	6	4	3	12	6	6	0	8	0	2	21	18	0	8	19	2	56

Source: Own elaborations of consultation findings.

7.5. Summary of the feasibility assessment

The annex summarises the assessment of the feasibility of introducing the proposed direct result indicators already discussed in the thematic sections of the report. The assessment has been based on the RACER criteria and on the methodology explained in Part I of the study. However, the table below does not include any assessment on the relevance, because indicators, which have been considered not relevant, have been excluded from the proposal. The other criteria are presented as follows⁶¹.















- Indicators are considered accepted if they can be monitored based on project reporting. On the contrary if there are some risks of low acceptance due to use of all the other possible sources (experts' work, survey, registers), the table includes 'X' for the indicator.
- Indicators are considered easy to monitor if there is a previous experience (e.g. they have been used in the previous programming period). On the contrary if there are some risks of difficult monitoring due to lack of experience, the table includes 'X' for the indicator.
- Indicators are ranked as credible and robust if their definition is based on some existing harmonised standards. On the contrary, if their definition can pose future challenges, the table includes 'X' for the indicator.














The table matches each indicator with 'X' only if there are some challenges in terms of acceptance, easiness to monitor, robustness and credibility:





- Three 'X' make the feasibility 'low',
- One or two 'medium',
- Zero 'high'.

⁶¹ The findings on the RACER criteria 'robust' and 'credible' are summarised in the one column of the table (Risk of ambiguous definition).

Table 49 Feasibility assessment of proposed direct result indicators

Direct result indicators (measurement unit)	Risk of low acceptance (other sources than project reporting or need of external expertise)	Risk of low easiness to monitor (no previous experience or costly previous experience)	Risk of ambiguous definition (no reference to existing standard)	Feasibility
D.1 Private investment matching public support to enterprises (grants) (euro)				High 
D.2 Private investment matching public support to enterprises (financial instruments) (euro) (euro)				High 
D.4 Employment increase in supported enterprises (FTEs)		X		Medium 
D.11 Survival rate of supported new firms (%)	X	X		Medium 
D.12 Public transport users (passengers)	X	X		Medium 
D.21 Estimated GHG emissions (tons of CO2 Equivalent)	X	X	X	Low 
D.24 Visitors to supported cultural and natural heritage sites (number)	X	X		Medium 
D.30 Household subscribing broadband of at least 100 Mbps (number)	X	X		Medium 
D.31 Enterprises subscribing broadband of at least 100 Mbps (number)	X	X		Medium 
D.32 Individuals interacting online with supported public authorities (number)	X	X		Medium 
D.33 Enterprises interacting online with supported public authorities (number)	X	X		Medium 
D.34 Supported enterprises reaching a High level of Digital Intensity (number)				High 
D.35 Length of integrated (fully upgraded) corridors corresponding to the TEN-T railway standard linking key national settlements / agglomerations				High 
D.36 Length of integrated (fully upgraded) corridors corresponding to the TEN-T road standard linking key national settlements / agglomerations				High 

Direct result indicators (measurement unit)	Risk of low acceptance (other sources than project reporting or need of external expertise)	Risk of low easiness to monitor (no previous experience or costly previous experience)	Risk of ambiguous definition (no reference to existing standard)	Feasibility
D.37 Time savings in the public transport system covered by the supported project	X	X		Medium 
D.38 Railway freight transport volume (tonnes)	X	X		Medium 
D.39 Waterway freight transport volume (tonnes)	X	X		Medium 
D.40 Population living in areas with accessibility to fully upgraded TEN-T corridors within 60 minutes (number of people)		X		Medium 
D.41 Enterprises using the services of supported business incubators and small investment facilities (total annual number)	X	X		Medium 
D.42 Job seekers using services of supported employment service infrastructure (total annual number)	X	X		Medium 
D.43 Population using supported health care infrastructure (total annual number)	X			Medium 
D.44 Population using supported social care (elderly care and long-term care infrastructure) (total annual number)	X			Medium 
D.45 People occupying supported housing units (number)	X			Medium 
D.46 Waiting time to use services provided by supported health or social infrastructure (average number of days)	X	X		Medium 
D.47 Average response time of emergency services (minutes)	X			Medium 
D.48 Users connected to the new or upgraded network (number)	X	X		Medium 
D.49 Children using supported child care (ISCED-0) infrastructure (total annual number)	X			Medium 

Direct result indicators (measurement unit)	Risk of low acceptance (other sources than project reporting or need of external expertise)	Risk of low easiness to monitor (no previous experience or costly previous experience)	Risk of ambiguous definition (no reference to existing standard)	Feasibility
D.50 Population using supported educational infrastructure (ISCED-1 to ISCED-8) (total annual number)	X			Medium 
D.51 Staff gaining a qualification (number)	X			High 
D.52 Entities using purchased, developed or improved systems, services, structures, tools and equipment (number)	X			Medium 
D.53 Average time to perform project assessment in competitive calls (days)				High 

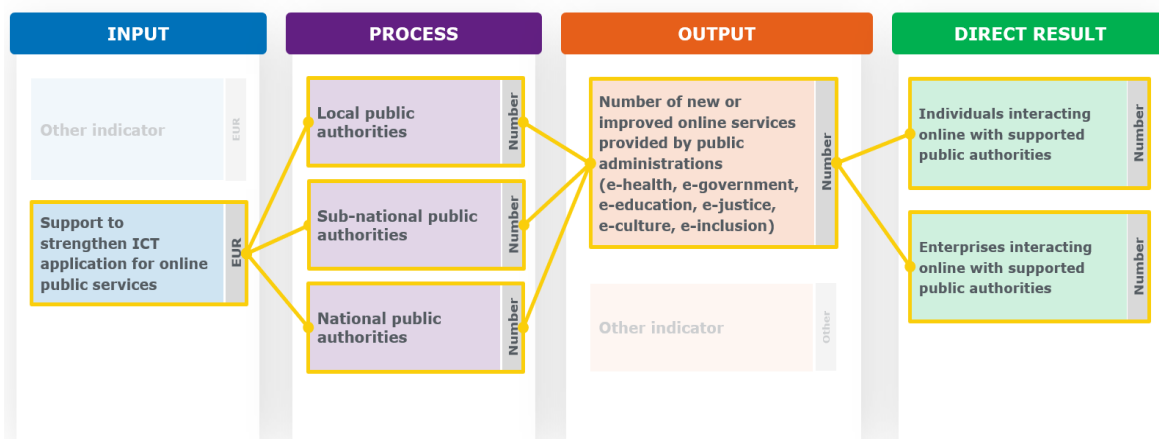
Note: 'red dots' indicate low feasibility, 'orange dots' medium feasibility, 'green dots' high feasibility

7.6. Examples of use of proposed indicators

This annex gives some illustrative examples of possible links between the proposed input, process, output and direct result indicators. These examples are not exclusive, because many links between the indicators can be possible.

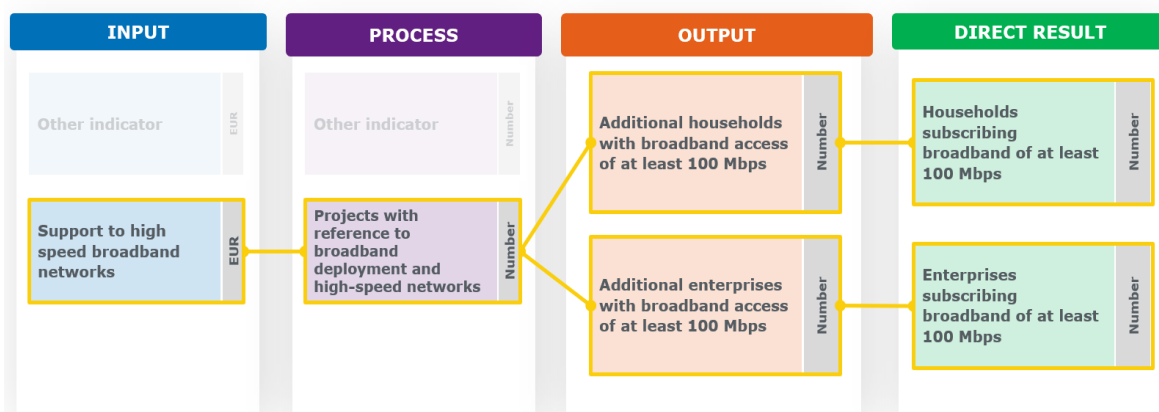
In the case of ICT for public services the input indicator relates to the investment in ICT applications and services, the number of public authorities (local, sub-national or national) receiving support is the process indicator, the number of new or improved online services provided by public authorities is the output indicator and all the entities, individuals and enterprises, using those services to interact online with public authorities is the direct result indicator.

Figure 1 Supporting ICT for public services – TO 2



In case of investment in broadband deployment, the financial amount invested in broadband and high-speed networks is the input indicator, the number of projects supported is the process indicator, while the number of additional enterprises and households, potentially covered by the broadband of at least 100 Mbps are the output indicators. The direct result indicators are respectively the number of enterprises and households subscribing the broadband connection for at least 100 Mbps.

Figure 2 Supporting broadband deployment and high-speed networks – TO 2



In TO 7, the input indicator measures the support to public transport system, the number of projects supported is the process indicator, the total length of improved railways lines (TEN-T and others) or the number of developed or improved transport management system are the output indicators. Time savings in the public transport system covered by the supported projects is the direct result indicator.

Figure 3 Supporting public transport system – TO 7

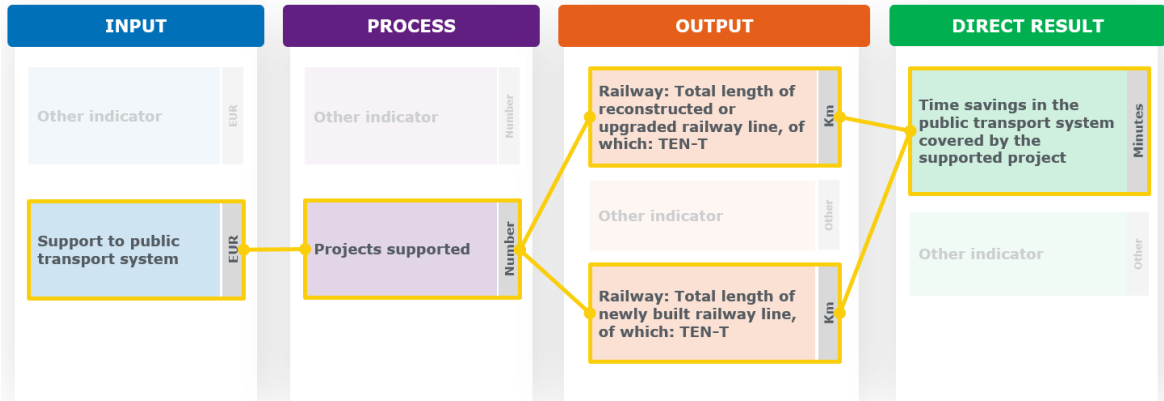
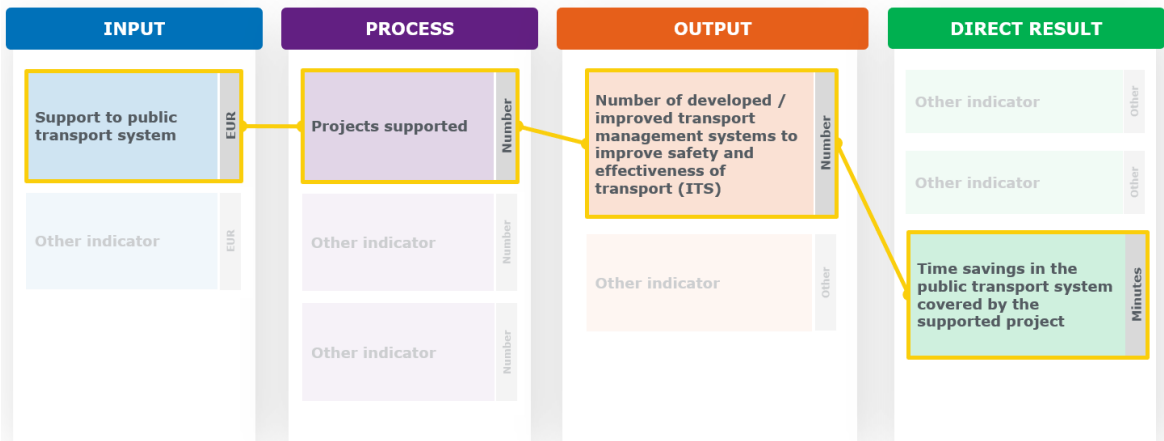
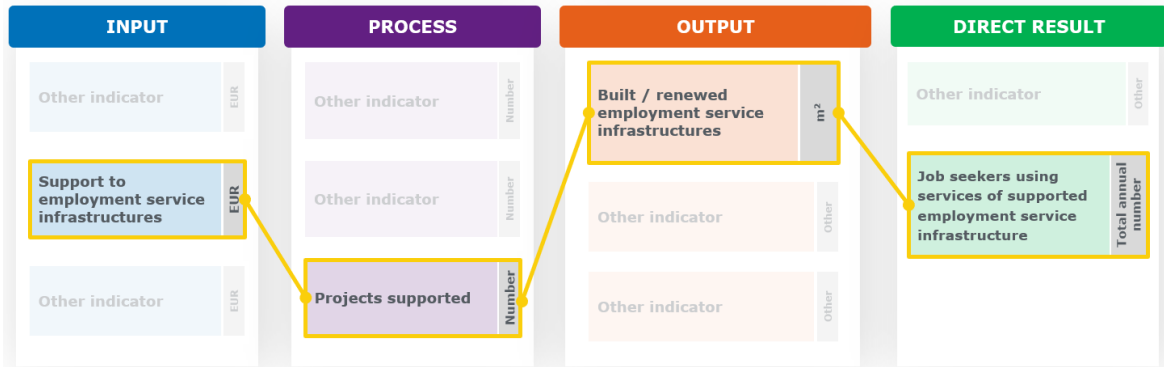


Figure 4 Supporting ITS – TO 7



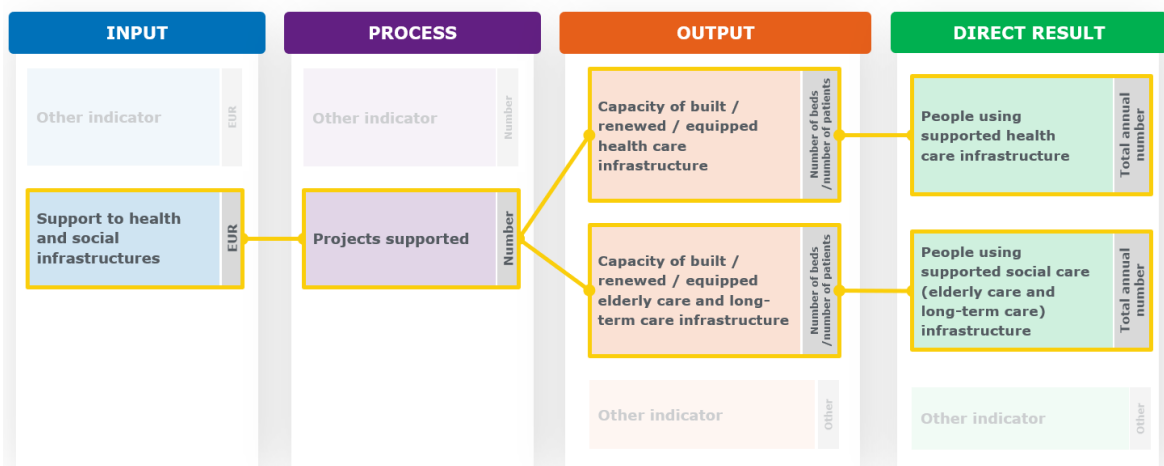
In the case of TO 8, the financial resources dedicated to support employment service infrastructure is the input indicator and the number of project supported the process indicator. The typical output indicator can be the surface of newly built or renewed employment service infrastructure and the job seekers using the services of supported employment infrastructure is the direct result indicator.

Figure 5 Support to employment service infrastructure – TO 8



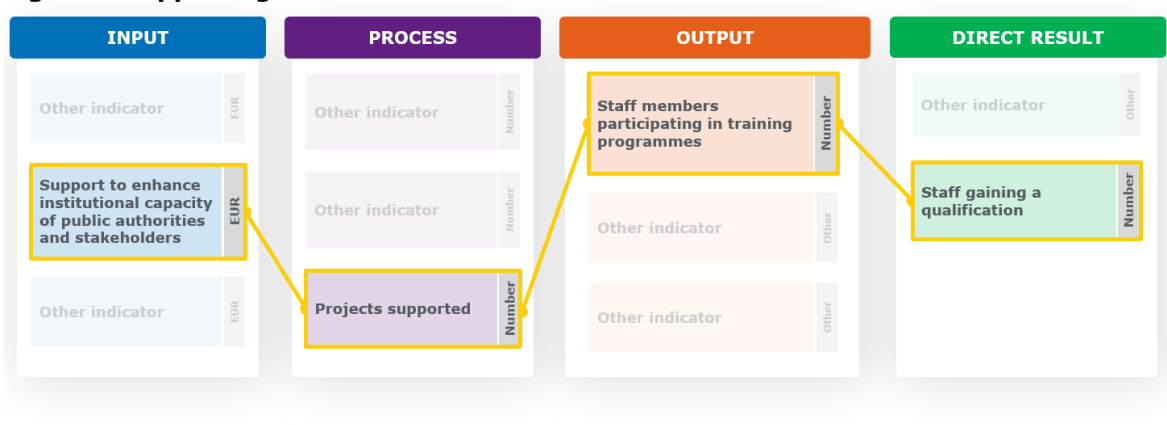
In the case of health and social infrastructure (elderly and long-term care) the financial resources invested in health and social infrastructure is the input indicator and the number of projects the process indicator. The typical output can be in one case the capacity of built, renewed or equipped health infrastructure and in the other case the capacity of built, renewed or equipped social infrastructure (elderly and long-term care). The direct result indicators can be respectively the number of people using health care infrastructure and the number of people using social care infrastructure (elderly and long-term care).

Figure 6 Support to health and social infrastructure – TO 9



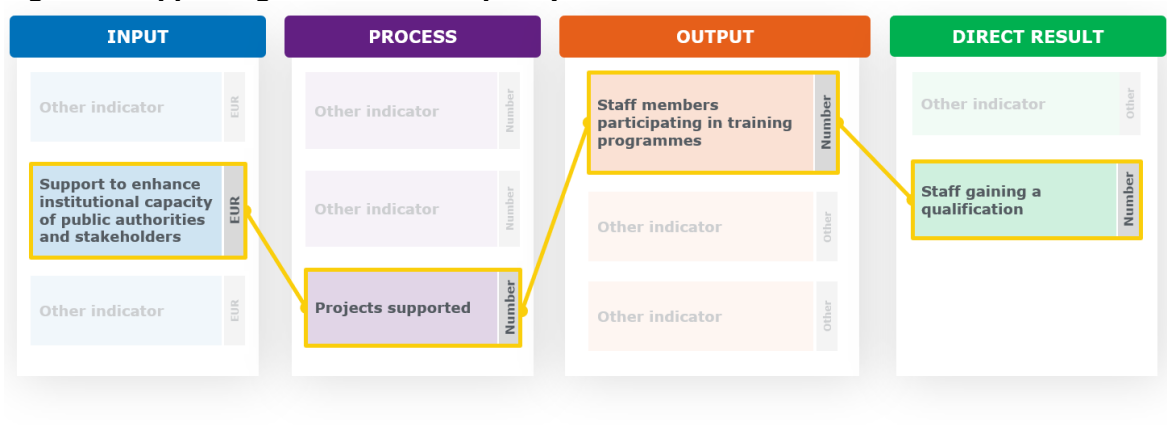
In the case of educational infrastructure, the input indicator is the financial amount invested and the process indicator measures the number of projects. The typical output indicators measure the capacity of built or renewed childcare infrastructure (ISCED-0) and the capacity of built or renewed educational infrastructure (ISCED-1 to ISCED-8). The direct result indicators can be the total annual number of children using supported childcare infrastructure (ISCED-0) and the total annual number of people using educational infrastructure (ISCED-1 to ISCED-8).

Figure 7 Supporting educational infrastructure – TO 10



In the case of TO 11, the input indicator measures the financial resources invested and the process indicator measures the number of projects supported. The output indicator is the staff members participating in training programmes and the direct result the staff gaining a qualification.

Figure 8 Supporting institutional capacity – TO 11



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