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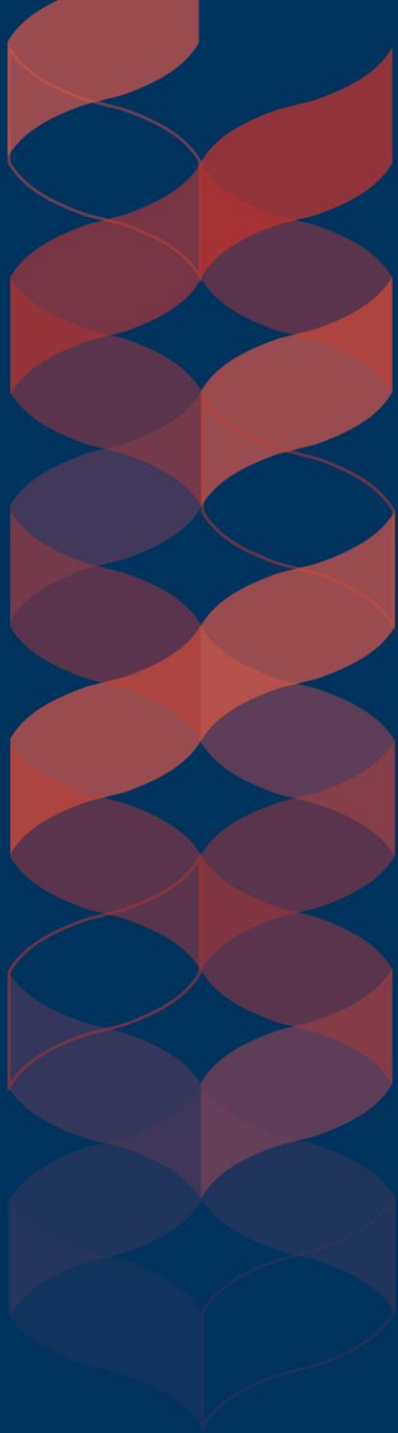
ANNEX 1 – PART 1/3

ANNEX

to the

**REPORT FROM THE COMMISSION
TO THE EUROPEAN PARLIAMENT, THE COUNCIL AND THE COURT OF
AUDITORS**

2019 Annual Management and Performance Report for the EU Budget



Annexes

Annex 1:

Programme performance overview

Introduction

The Commission is continuing to improve the presentation of performance information relating to EU spending programmes, in order to provide accurate, reliable and understandable information on programme performance. This annex contains the programme performance overview. This overview is a summary of the programme statements attached to the 2021 draft budget. It presents all EU spending programmes for the 2014-2020 period in a concise and uniform way. For each programme, the overview provides information on:

- what the programme is about;
- why it is necessary;
- a selection of key performance indicators;
- where we are in the implementation;
- performance assessment;
- concrete examples of achievements.

This year the programme performance overview includes a new 'Performance assessment' section, which presents a summary of the overall progress towards achieving the programme objectives now that the end of the 2014-2020 programming period is approaching. However, it is important to note that the implementation of certain programmes will continue for a number of years beyond the end of the period, as provided for in their legal bases. This applies in particular to the European Structural and Investment Funds.

The information summarised and presented in this overview for each individual programme does not replace the full set of data and performance information as required by Article 41(3)(h) of the financial regulation. A complete overview of all 60 EU spending programmes is presented in the *Working Document Part I – Programme statements of operational expenditure* of the 2021 draft budget.

Presentation of financial data

The financial data presented in this report relate to the implementation of budget appropriations authorised by the European Parliament and the Council in the annual budget procedures under the 2014-2020 multiannual financial framework. Consequently, expenditure relating to amounts carried over and to assigned revenues are not taken into account in the financial data. Similarly, payments made in the course of the 2014-2020 period on the outstanding commitments from the 2007-2013 period are not included in the calculation.

Methodological note

Selection of indicators

The performance framework for the 2014-2020 spending programmes includes more than 700 indicators measuring performance against more than 60 general objectives and more than 220 specific objectives. The programme performance overview presents the most relevant indicators from the programme statements.

It is crucial to bear in mind that the information contained in the indicators provides only an indication of the overall performance and achievements of each specific programme. It is only possible to make fully substantiated statements about the ultimate performance of programmes by taking into account the specific implementation context, including qualitative as well as quantitative elements. The Commission does this in the context of regular evaluations of its spending programmes.

The selection of indicators for the programme performance overview was made based on the following criteria, aiming to present a balanced or representative picture of programme performance:

- availability of data: quantitative target, results available for either 2019 or 2018, and results available for at least 3 years of the 2014-2019 period;
- professional judgement taking into account the relevance of the indicator, aiming to present a balanced or representative picture of programme performance in relation to the specific objectives of the programme and to what extent the indicator reflects the results of EU budget intervention.

Definition of targets

Targets are defined at the beginning of the programmes and come in various forms (e.g. quotas, benchmarks, numerical goals). In most cases, the final target is set for 2020, the end of the programming period. However, account should be taken of the specific nature of the shared management programmes (in particular in the areas of agriculture and cohesion), which are characterised by a long start-up phase (e.g. planning, programming, authorisations) followed by a long implementation cycle. As such, the appropriations for the European Structural and Investment Funds can be implemented in the 3 years following the commitment of the funding, therefore the final target is set for 2023, in accordance with the ' $n + 3$ ' rule.

Definition of baselines

A baseline is a measurement taken prior to a specific intervention, which allows the results before and after (i.e. with and without) the intervention to be compared. In the context of the EU budget, the baseline is the measurement of the indicator before the start of EU budget funding for the current programming period.

Because of its nature, a baseline is not always available for all the indicators, whereas in other cases the baseline should be considered to be zero. This is the case, for example, for the 'output indicators' relating to the specific deliverables of the intervention, such as the number of projects funded by the EU budget. In the case of output indicators, the measurement prior to the EU budget intervention (baseline) is considered to be zero.

It is important to make a distinction between a baseline and a historic benchmark or reference. The measurement of an indicator before the 2014-2020 period should not automatically be considered as a baseline, since its measurement could have been influenced by the EU budget actions from the previous period (2007-2013).

The baseline of an indicator is used when the indicator meets the following three conditions.

- A quantitative baseline is available in the programme statements.
- The baseline meets the definition of measurement before EU budget intervention.
- The target represents an improvement (i.e. a better result) compared to the baseline – otherwise the progress could not be calculated. Depending on the indicator, an improvement can be an increase or a decrease compared to the baseline.

Definition of 'progress towards the target' charts

The 'progress towards the target' charts present a snapshot of selected indicators providing a consistent presentation of performance information across programmes.

General formula

The general formula to calculate the 'progress towards the target' percentage is as follows:

$$\text{Progress \%} = (\text{last year result} - \text{baseline}) / (\text{target} - \text{baseline})$$

Example

Programme: Implementation and exploitation of European satellite navigation systems (Galileo and EGNOS) ⁽⁸⁸⁾

Specific objective 1: To develop and provide global satellite-based radio navigation infrastructures and services (Galileo) by 2020

Indicator 1: Galileo infrastructure – cumulative number of operational satellites

Baseline 2013	Actual results							Target 2020
	2014	2015	2016	2017	2018	2019	2020	
4	3	9	18	22	26	26		30

$$\text{Progress \%} = (26 - 4) / (30 - 4) = 85\%$$

Adaptations

Specific adaptations, if any, are noted in the footnote at the bottom of the respective figures. Examples of such adaptations are as follows.

- (a) In cases where the progress should be expressed in a cumulative way from the beginning of the 2014-2020 period, and the annual results are not cumulative, then the 'last year result' is replaced in the formula by the 'sum of the annual results from the beginning of the period':

$$\text{Progress \%} = (\text{sum (results 2014:2019)} - \text{baseline}) / (\text{target} - \text{baseline})$$

- (b) In cases where the progress cannot be expressed in a cumulative way, and the 'last year result' does not reflect the progress of the programme during the period as a whole, then the 'last year result' is replaced in the formula by the 'average of the annual results from the beginning of the period':

$$\text{Progress \%} = (\text{average (results 2014:2019)} - \text{baseline}) / (\text{target} - \text{baseline})$$

⁽⁸⁸⁾ Information presented in the *Working Document Part I – Programme statements of operational expenditure* attached to the 2021 draft budget.

- (c) Whenever the target is not expressed in a cumulative way for the 2014-2020 period, and the annual milestones are available for all the years, in cases where the progress of the programme is better reflected comparing the results to the annual milestones, then targets are replaced in the formula by annual milestones (sum or average of the annual milestones, depending on the formula selected for the annual results). For example:

$$\text{Progress \%} = (\text{sum (results 2014:2019)} - \text{baseline}) / (\text{sum (milestones 2014:2020)} - \text{baseline})$$

$$\text{Progress \%} = (\text{average (results 2014:2019)} - \text{baseline}) / (\text{sum (milestones 2014:2020)} - \text{baseline})$$

Cut-off date of performance information

The most recent performance information available is used. For the programmes that are directly managed by the Commission, this mostly concerns reported achievements measured at the end of 2019. The programmes under shared management present values recorded and reported by Member States of the situation at the end of 2018. The programmes under indirect management present a mixed picture: some have achievements reported up to 2019, while others depend on the data sources provided by the international organisations that implement the actions (e.g. the UN family) and may therefore be delayed.

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LEGAL BASIS

Regulation (EU) No 1285/2013 of the European Parliament and of the Council

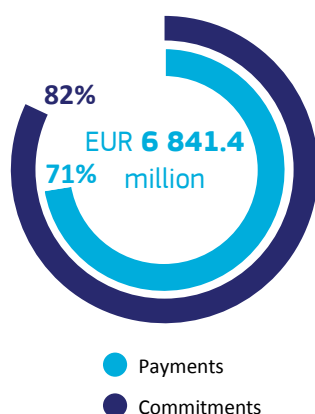
MORE INFORMATION

<https://europa.eu/TP38Kh>

FINANCIAL PROGRAMMING

(million EUR)

2014	1 326.2
2015	1 060.6
2016	851.6
2017	897.5
2018	807.9
2019	690.7
2020	1 207.0
Total	6 841.4

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The midterm review of the programmes was carried out in 2017: <http://europa.eu/KF39Uq>
The impact assessment on the EU space programme and the European Union Agency for the Space Programme was adopted in 2018: <https://europa.eu/!XF34px>
An impact assessment on the use of Galileo for critical infrastructures is ongoing.

How is it implemented?

The Directorate-General for Defence, Industry and Space is the lead DG for the implementation of the programme. Both Galileo and EGNOS are implemented mainly through indirect management by the European GNSS Agency and the European Space Agency, though part of the budget is implemented through direct management by the Commission (grants and procurement).

GALILEO AND EGNOS

IMPLEMENTATION AND EXPLOITATION OF EUROPEAN SATELLITE NAVIGATION SYSTEMS

What are Galileo and EGNOS?

Galileo is a European large-infrastructure project and is entirely financed by the EU budget. It is Europe's Global Satellite Navigation System, and will ensure the continent's autonomy in an area that is of strategic importance to both its economy and its security. Galileo will be used for a large number of purposes, including critical business processes that require uninterrupted navigation and timing services needed, for example, for critical applications such as the synchronisation of electricity grids and telecommunication networks. The Galileo system consists of a satellite constellation and the necessary ground infrastructure to control the satellites and enable the provision of positioning, navigation and timing services. EGNOS (the European Geostationary Navigation Overlay Service) is a fully operational regional satellite navigation system monitoring and correcting open signals emitted by the US Global Positioning System (GPS), and in the future of Galileo. It consists of several transponders installed on geostationary satellites and a network of ground stations. By improving the accuracy and reliability of the GPS signal across the territory of Europe, EGNOS allows users to use GPS signals for safety-critical applications such as aircraft operations, and allow users in Europe and beyond to determine their position to an accuracy of around 1 metre.

**Specific objectives**

- To develop and provide global satellite-based radio navigation infrastructures and services by 2020 (Galileo).
- To provide satellite-based services improving the performance of GPS to gradually cover the whole of the European Civil Aviation Conference region and neighbouring European countries by 2020 (EGNOS).

Why is it necessary?

About 11% of the EU's gross domestic product, i.e. about EUR 1 300 billion, relies on satellite navigation signals, often controlled by non-EU countries. EGNOS and Galileo ensure Europe's autonomy and provide additional benefits in combination with other GNSSs (global navigation satellite systems), resulting from the additional services of the systems and the increased performance provided by additional satellites. Galileo is also the only GNSS specifically designed for civil purposes, i.e. it aims to satisfy the requirements and the needs of the civil sector, in compliance with the most demanding security standards. Billions of users across the world are expected to use Galileo, and it will therefore achieve a level of outreach unequalled by any other EU infrastructure. Both programmes are complex projects that exceed the financial and technical capacities of a single Member State. As such, they fall fully within the competence of the EU. Considering their requirements in terms of security, all Member States must be involved in the programmes.






Outlook for the 2021-2027 period

The Commission proposed to integrate all existing and new space activities under the umbrella of a single EU space programme.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
897.5	2017	801.9	
807.9	2018	901.5	
690.7	2019	990.7	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Market share of the EU's GNSS industry – EGNOS	63%		85%	68% compared to 85%
Market share of EU's GNSS industry – Galileo	35%		70%	42% compared to 70%
Galileo infrastructure – satellites	4		30	26 out of 30 operational satellites
Galileo services provision implemented			5	3 out of 5 services implemented
EGNOS service availability index ⁽¹⁾			99.0%	99.1% compared to a target of 99.0%

 % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014-2018.

Where are we in the implementation?

Galileo

- The deployment of the Galileo space infrastructure continued with the aim of reaching full operational capability. By the end of 2019 there were 26 Galileo satellites in orbit and providing services, 22 of which are fully operational for all services. The two satellites launched in the wrong orbit in 2014 are used for the search and rescue service, and underwent in-depth tests and modifications of their on-board software between 2016 and 2017 to allow their operational use for the open service by the end of 2020. The production of additional first-generation satellites is ongoing with the procurement of batch 3 (12 satellites), the contract for which was signed in June 2017. The first of these satellites are scheduled to be delivered by August 2020. In order to initiate the transition between the first and second generations of Galileo satellites and to ensure the maintenance of the Galileo constellation in the future, a procurement process for transition satellites was launched in 2018 and is expected to be finalised in 2020.
- A contract for the development of a dispenser for carrying Galileo satellites was signed with the Ariane Group in the summer of 2019. The first Ariane 6 dispenser flight model for Galileo will be delivered by early 2021.
- Regarding the Galileo ground infrastructure, the ground-mission and ground-control segment continued Galileo satellite operations. In February 2019 a major upgrade of the Galileo ground infrastructure began in order to improve the robustness of the system and its compliance with security requirements. The European GNSS Service Centre in Madrid (Spain) continued to provide a single interface between the Galileo system and Galileo users. To ensure the independent monitoring of the Galileo services, the Galileo Reference Centre began operations in Noordwijk (Netherlands) in May 2018, supporting the GNSS performance monitoring needs of the European Union Aviation Safety Agency and providing support to Eurocontrol. The Galileo Security Monitoring Centre back-up site was transferred from the United Kingdom to Spain in 2019.
- Regarding security, key actions included measures to improve cybersecurity; to obtain and maintain security accreditation for operations and for site infrastructure; and to develop operational concepts and procedures for the public regulated service. This is an encrypted navigation service for authorised government users and sensitive applications that require a high level of continuity. The public regulated service will ensure a better continuity of service for authorised users when access to other navigation services may be degraded, while in cases of malicious interference it increases the likelihood of the continuous availability of the signal in space.
- To ensure the continuity of services beyond 2020, the future Galileo services and high-level objectives for security were defined in the evolution of the high-level definition document. In parallel, preparatory activities have begun for the definition of new Galileo services to be developed as of 2021, such as an emergency service to broadcast warnings related to natural disasters.
- Galileo's three initial services (the open service, the public regulated service and the search and rescue service) were continuously provided in 2019, with the exception of a 6-day interruption in July of the Galileo initial navigation and timing services due to a technical incident. Nevertheless, the Galileo search and rescue service was unaffected. The independent inquiry board set up by the Commission analysed the root causes of the incident and provided recommendations. The Commission has put in place a process to implement the recommendations to ensure that Galileo is a stable, robust and resilient system.
- In 2019 several activities aiming to support the market uptake of Galileo were undertaken, including Galileo acceleration; hackathon initiatives for the development of applications using Galileo signals; and standardisation activities.

EGNOS

- The continuity and quality of all EGNOS services beyond 2020 were ensured in 2019 through the ongoing development of a major EGNOS release version and the completion of the study phase for an additional version, which will improve the coverage of European territories. Procurement relating to the latter's implementation phase was carried out in 2019 and is expected to start delivering its services around 2023.
- The EGNOS service area was extended up to latitude 72 degrees north. To that end, an update of the *EGNOS Safety of Life – Service definition document* was published in 2019. Activities for the development of EGNOS version 3 continued. In October 2019 a satellite hosting the GEO-3 payload for EGNOS version 3 was successfully launched.
- The 2018 regulation laying down airspace usage requirements and operating procedures for performance-based navigation aimed at enhancing EGNOS's market uptake by requiring the publication of localizer performance with vertical guidance procedures delivered by EGNOS in all European instrument runway ends before January 2024.
- In the field of international cooperation, negotiations continued with Norway and the United States for access to the Galileo public regulated service. Progress was made with the extension of EGNOS to European neighbourhood policy south countries with the approval of EUR 9 million in funding for infrastructure needed to provide them with the EGNOS safety-of-life signal.
- The Commission has: (1) granted extended licences to Galileo-related intellectual property rights, thus enabling industry to make use of knowledge and assets generated under the EU space programme; and (2) licensed patents from industry and sublicensed them subsequently for free use by the general public.

Performance assessment

- Galileo progressed towards its target of developing and providing global satellite-based radio navigation infrastructures and services by 2020. Its progress was, however, impacted by the service incident of July 2019. The recommendations of the independent inquiry board aim at ensuring uninterrupted service provision and focus mainly on the review of Galileo's operational management, including interactions between the Commission, the European GNSS Agency and the European Space Agency. The implementation of the recommendations is ongoing, and its completion is a priority for 2020: measures establishing a unique end-to-end maintenance and configuration management system are being introduced and operational procedures and processes have been updated.

- Regarding the ground infrastructure, deployment of the new system release Galileo system build 1.5.1 progressed significantly despite delays due to the Galileo incident. This release includes improvements to the infrastructure in order to support increased availability in the provision of services. Following the last launch of Galileo satellites in 2018 and the in-orbit test review in early 2019, the total number of operational satellites in orbit increased to 26, in line with the milestone set for this specific objective. The manufacturing of additional satellites to complete the constellation and to provide sufficient spare capacity to ensure its continuity has continued in accordance with the planned schedule. In particular, in preparation for the Galileo second generation, the procurement of transition satellites launched in 2018 is expected to result in a contract award in the second half of 2020. The main challenges encountered were linked to the consolidation of the satellites' technical specifications, as work to define the requirements for the Galileo second generation is not yet complete.
- Gradual improvements have been made in the provision of Galileo services: a new service-definition document for Galileo's open service was published in 2019, providing minimum performances levels in positioning and timing; and a new search and rescue functionality, the return link service, became operational in the same year. The performance levels of the Galileo open service and the Galileo search and rescue service in terms of availability and accuracy continuously exceeded the minimum-performance-level targets defined in the service-definition documents.
- The deployment of the Galileo ground and space infrastructure is directly linked to the implementation schedule for the provision of the high accuracy service (20 cm positioning accuracy) by the end of 2021. It is thus significant for the delivery on the programme's objectives.
- Concerning security, key actions for 2020 include measures to ensure the accreditation of the system, in particular cybersecurity issues. Concerning Galileo's security governance, the midterm review recommended reassessing the allocation of responsibilities between the Commission and the European GNSS Agency; the role of the Member States; the role of the Council, the High Representative of the EU for Foreign Affairs and Security Policy and the European External Action Service; and the independence and autonomy of the Security Accreditation Board with respect to the European GNSS Agency and the choice of legal instruments for technical security matters (delegated acts versus implementing acts).
- EGNOS's performance in relation to its objective of providing satellite-based services that improve the performance of GPS to gradually cover the whole territory of the EU Member States has steadily got better. Currently, the only territories not covered are the Azores (Portugal), Cyprus and northern Norway, due to the limitations of the current technology and the Ranging and Monitoring Stations network. Cyprus is expected to be covered in 2020 and Northern Norway in 2023, with the deployment of a future version of EGNOS. The Azores will be covered around 2025, once the ground segment is upgraded to EGNOS V3.
- The objective of continuous delivery of EGNOS services was successfully achieved through the efficient implementation of recurring activities and the preparation of system updates. In terms of service availability, at the end of 2019 there were approximately 350 EGNOS-enabled airports in 23 countries in Europe. Thus, the objective of an annual increase in the number of airports has been achieved annually since 2014. In the agriculture sector, more than 80% of European farmers using satellite navigation for tractor guidance rely on EGNOS.
- In terms of performance in relation to the market share of the EU GNSS industry in the worldwide GNSS downstream market, Galileo has achieved steady progress. In 2019 Galileo was present in 42% of receiver models worldwide. Exceeding the expectations at the time when the 2020 target was set, in 2019 there were more than 1 billion Galileo-enabled smartphones on the market. However, in other market segments (e.g. rail, maritime) its market penetration is lower. This is due to various reasons: the long lifetime of receivers on the market; missing certification or standardisation; the energy consumption constraints of the connected objects; optimisation costs (there are still many GPS-only models available); and receiver models serving only regional markets (e.g. Chinese or US manufacturers). The market share is expected to increase in the coming years, mainly due to the phasing out of old models, the increasing use of Galileo in the United States and the use of Galileo signals in safety-critical applications in the aviation or rail sectors.
- With regard to EGNOS, in 2018 and 2019 the presence of EGNOS in receiver models stabilised at 68% of the total number of receiver models worldwide. The market penetration of EGNOS is lower than expected, in particular in location-based services. This is because the early uptake of dual frequency in receiver models greatly outperformed the benefits of EGNOS. Also, the rapid development of many GNSS constellations and the commercial augmentation of the signals increased GNSS performance to the level where the benefits of EGNOS are less competitive than assumed in 2014. Therefore, with regard to the 2020 target, it can be assumed that the number of EGNOS-enabled receivers will not grow beyond 70% of receiver models worldwide.
- In 2020 market-uptake activities will continue with the implantation of actions stemming from the space strategy for Europe, with a focus on:
 - pursuing market uptake, standardisation, and research and development activities, notably in the three priority domains of intelligent transport, intelligent infrastructures and intelligent interconnectivity;
 - strengthening Europe's role as a global actor in space by promoting the worldwide use of Galileo and EGNOS, fostering cooperation with strategic partners and ensuring interoperability with other systems, pursuing economic diplomacy and outreach activities and continuing international negotiations on access to the public regulated service and the extension of EGNOS coverage, notably to partner countries of the European Neighbourhood Instrument South and East;
 - pursuing radio spectrum coordination and frequency protection activities.
- For the next programming period, the Commission proposed to make EUR 16 billion available to help maintain and further enhance the EU's leadership in space. The proposal would bring all existing and new space activities under the umbrella of a single EU space programme. The latter would maintain the existing infrastructure and services and introduce a number of new features, such as a unified system of governance.

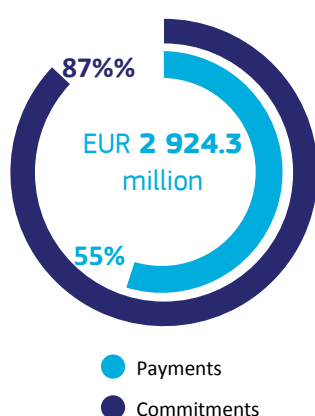
Concrete examples of achievements

10 minutes	1 billion	16-metre	7
is the amount of time required by Galileo's search and rescue service to detect emergency distress beacons, compared to up to 3 hours previously.	Galileo-enabled smartphones are in use.	accuracy of Galileo's location information, compared to the 2-10 km accuracy displayed by the current Cell ID technology.	Member States have had support from the Help 112 II project.

LEGAL BASISCouncil Decision
2013/791/Euratom**MORE INFORMATION**<http://fusionforenergy.europa.eu/>
<https://www.iter.org/>**FINANCIAL PROGRAMMING**

(million EUR)

2014	729.8
2015	391.9
2016	329.9
2017	322.5
2018	376.4
2019	409.1
2020	364.8
Total	2 924.3

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The midterm progress report for ITER and the development of fusion energy was adopted on 21 March 2019
<https://europa.eu/IHq99Nh>

How is it implemented?

The Directorate-General for Energy is the lead DG for the implementation of the programme. Programme implementation is entrusted to the Fusion for Energy Joint Undertaking.

ITER

INTERNATIONAL THERMONUCLEAR EXPERIMENTAL REACTOR**What is ITER?**

ITER ('The Way' in Latin) aims to demonstrate that fusion is a viable and sustainable source of energy. The ITER project, which is part of the strategic energy technology plan, aims at building and operating an experimental fusion reactor. It is a major step towards demonstrating that fusion is a sustainable energy source. Due to its significant advantages, such as the availability of large fuel reserves and the lack of CO₂ emissions, fusion could contribute greatly to the European Green Deal in a safe, efficient and secure way. The magnetic fusion device is being built in Saint-Paul-lès-Durance (France) with the support of seven international partners that represent half of the world's population (Euratom, China, India, Japan, Russia, South Korea and the United States). The programme covers the EU's contribution to the ITER Organisation for the construction of the ITER facility, which includes the procurement of equipment, installation and general technical and administrative support for the construction phase, along with participation in commissioning and operations. The programme also covers other activities, such as the Broader Approach activities with Japan, consisting of activities that aim to complement the ITER project and to accelerate the realisation of fusion energy through R & D and advanced technologies. These contributions are channelled through an EU agency, the Fusion for Energy Joint Undertaking, located in Barcelona (Spain).

**Specific objectives**

- To provide Euratom's contribution to ITER and ITER-related activities.
- To support EU industry and research through the construction of ITER and ITER-related activities.

Why is it necessary?

ITER will achieve what no single country can do on its own. The risk, the costs and the long-term nature of a large research project such as ITER put it beyond the reach of individual Member States, and even of the EU itself. Thus, the establishment of a global framework through an international agreement between Euratom and six other parties was essential in order to undertake this large-scale scientific experiment. The construction of ITER started in 2007, and Euratom provides about 45% of all components through the Fusion for Energy Joint Undertaking.

The EU's support for ITER and its activities contributes to the European Green Deal. ITER is stimulating the EU's industrial investment in new advanced technologies for the components of the facility and in advanced civil engineering for its construction. Fusion has enormous potential, and represents almost incalculable value as an environmentally acceptable and virtually unlimited source of energy. In addition, thanks to its leadership in fusion research and the construction of ITER, the EU will

be in a privileged position to reap the benefits of constructing and operating the first generation of fusion power plants in the future. Regarding ITER's place in energy policy and decarbonisation, the project remains an important part of the EU's energy and innovation policy, and although it does not contribute directly to energy and climate targets in the short to medium term, its potential role in the decarbonisation of the energy landscape post-2050 is very significant.

Outlook for the 2021-2027 period

The Commission proposed the continuation of this long-term project for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
322.4		2017	387.5
376.4		2018	398.2
409.1		2019	360.5

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Euratom's obligations discharged	6%	<div><div style="width: 65%;">65%</div></div>	63%	41% compared to 63% of obligations discharged through the Fusion for Energy Joint Undertaking
Budget committed to industry and laboratories		<div><div style="width: 78%;">78%</div></div>	100%	78% compared to 100% budget committed

■ % of target achieved by the end of 2019

Where are we in the implementation?

- Preliminary operations will begin in 2025 with the 'first plasma phase'. The construction of ITER will continue until 2035, when testing will end and experimental operation will commence. Currently, 51.8% of all construction activities that will be required by the end of construction work in 2035 have been completed. The EU's in-kind contribution to the ITER project grew from around 34% in December 2018 to almost 42% in December 2019, and its cash contribution to the ITER Organization by the end of 2019 amounted to some EUR 1 140 million (committed amounts). This represents an equivalent value of about one third of the overall cash contribution for the construction phase. ITER is continuing to move towards its assembly phase.
- Concerning the progress at the ITER site, in November 2019 the walls and floors of the Tokamak building were finished. This marked the successful completion of an important construction milestone, about 5 years from the first pouring of concrete for the basement slab. Construction is well advanced on the Crane Hall, which will enlarge the Tokamak building to accommodate the cranes that will move the components during assembly. The first and second modules of its roof were lifted into place by the Fusion for Energy Joint Undertaking on 4 December 2019.
- As of the end of November 2019, the work up to the 'first plasma' milestone (2025) was 65.9% complete. This progress corresponds to an average rate of 0.68% per month over the last 21 months. To reach first plasma, all components from the ITER members need to be available and delivered on time to the ITER Organization, and assembled and installed in the Tokamak complex.
- The Fusion for Energy Joint Undertaking plans to commit more than EUR 550 million to procurement contracts in 2020.

Performance assessment

- The ITER project is performing well, now that the deficiencies identified at the beginning of the 2014-2020 period (such as the immaturity of the design; manufacturing challenges; management deficiencies; a lack of cooperation between domestic agencies and the ITER Organization; and schedule and cost estimates being perceived to be unreliable) have been addressed. This has improved the overall effectiveness of the project, and has thus allowed the reactor's assembly phase to begin.
- The ITER parties launched a major overhaul of the project in 2015, which included the appointment of new senior management personnel in the ITER Organization, along with an action plan. The action plan envisaged the complete reorganisation of the ITER Organization; close cooperation with domestic agencies; the freezing of the design to allow the construction of buildings and other components; and the establishment of a reserve fund as an incentive for the ITER Organization to minimise changes as much as possible. A new, reliable baseline was approved in November 2016, stabilising the project and providing a realistic basis for its completion.
- Stringent supervision and proactive management by the Commission has been put in place, in line with the supervision strategy that has been adopted. This includes the nomination of prominent experts for management roles and for the decision-making bodies of the ITER Organization, and rigorous monitoring of the implementation of the recommendations of the annual management assessment reports.

Concrete examples of achievements

10	80 000	18
types of concrete have been developed for use in the Tokamak building.	embedded plates have been anchored into the Tokamak building.	heavy doors weighing 70 tonnes have been installed in the Tokamak building.

- The pouring in November 2019 of the final concrete at the Tokamak building marked the successful completion of an important construction milestone, around 5 years on from the first pouring of concrete for the basement slab. This first-of-its-kind infrastructure for a fusion device was new territory for all involved, and needed to comply with the extremely strict standards set by the French Nuclear Safety Authority. Around 10 types of concrete were developed to be used in the construction of different parts of the structure. The building has more than 80 000 embedded plates, anchored deep into the concrete and accurately positioned to match the location of the ITER equipment that will be installed. Moreover, 18 of the 46 heavy doors have been installed, weighing 70 tonnes each, to ensure that the radiation resulting from the fusion reaction is kept inside.

LEGAL BASIS

Regulation (EU) No 377/2014 of the European Parliament and of the Council and repealing Regulation (EU) No 911/2010

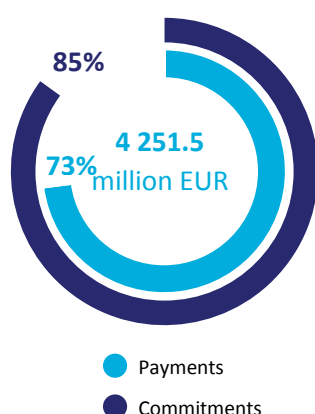
MORE INFORMATION

<http://www.copernicus.eu>

FINANCIAL PROGRAMMING

(million EUR)

2014	362.9
2015	556.4
2016	586.2
2017	607.4
2018	630.2
2019	861.5
2020	646.9
Total	4 251.5

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The interim evaluation of Copernicus was carried out in 2017: <http://europa.eu/!GJ34Xr>

The impact assessment of the space programme of the EU and the European Union Agency for the Space Programme was adopted in 2018: <https://europa.eu/!XF34px>

The assessment of Copernicus *ex ante* benefits was adopted in 2017: https://www.copernicus.eu/sites/default/files/2018-10/Copernicus-Ex-Ante-Final-Report_0_0.pdf

How is it implemented?

The Directorate-General for Defence, Industry and Space is the lead DG for the implementation of the programme through indirect management as well as direct action ⁽⁸⁹⁾.

COPERNICUS

THE EUROPEAN EARTH OBSERVATION PROGRAMME

What is Copernicus?

Copernicus is the European system for monitoring the Earth. It is a user-driven programme offering six free-of-charge services to EU, national and regional institutions, as well as to the private sector: atmosphere monitoring, marine environment monitoring, land monitoring, climate change, emergency management and security. The programme builds on the initiative on global monitoring for the environment and security launched in 1998. It aims at filling the gaps in European earth observation capacities. Data is provided from space infrastructures, particularly the sentinel missions developed under the programme, other missions and in situ infrastructure supported by the Member States. Copernicus services are operated by EU bodies and agencies.

The Copernicus services transform this wealth of satellite and in situ data into value-added information by processing and analysing the data. Datasets stretching back for years and decades are made comparable and searchable, thus ensuring the monitoring of changes and their impact; patterns are examined and models are used to create better forecasts, for example of the ocean and the atmosphere. Maps are created from imagery, features and anomalies are identified and statistical information is extracted.

**Specific objectives**

- Delivering accurate and reliable data and information to Copernicus users, supplied on a long-term and sustainable basis enabling the services connected to the programme's general objectives referred to in Article 4(1) of Regulation (EU) No 377/2014 and responding to the requirements of Copernicus core users.
- Providing sustainable and reliable access to spaceborne data and information from an autonomous European Earth observation capacity.
- Providing a sustainable and reliable access to in situ data, relying, in particular, on existing capacities operated at European and national levels, and on global observation systems and networks.

Why is it necessary?

The Copernicus programme has a pan-European capacity and depends on the coordinated provision of data and services throughout all the Member States, which needs to be coordinated at EU level. From an economic point of view, action at EU level also allows for economies of scale, which benefits public spending. Copernicus (the former Global Monitoring for Environment and Security) explicitly refers to many areas of EU legislation in the areas of environment, civil protection, security, climate change, the internal market, transport, energy, cooperation with non-EU countries and humanitarian aid, and also covers aspects of space debris surveillance and tracking. Copernicus data and information benefit

several EU policies, from agriculture to coastal surveillance, climate change adaptation, the information technology sector and education.

Outlook for the 2021-2027 period

The Commission proposed to integrate all existing and new space activities under the umbrella of a single European space programme.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
607.4	2017	635.0	
630.2	2018	558.9	
861.5	2019	601.0	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Number of specific service components	6	<div><div>100%</div></div>	14	14 out of 14 service components
Market penetration	100	<div><div>> 100%</div></div>	140	195 compared to 140 index
Engaged users	10 000	<div><div>> 100%</div></div>	20 000	300 000 compared to 20 000 engaged users
Space infrastructure		<div><div>88%</div></div>	8	7 out of 8 satellites deployed
Availability of data		<div><div>100%</div></div>	6	6 out of 6 services

% of target achieved by the end of 2018

Where are we in the implementation?

- In 2017, the Sentinel 2-B and Sentinel-5p satellites were launched. The addition of Sentinel-5p is significant, as it increased Copernicus's own capacity to monitor atmospheric composition, especially for polluting gases. In 2018, Sentinel 3-B was launched. In response to a great surge in registered users' uptake (their number exceeded 200 000), five new data and information access service platforms were launched and have been operational since June 2018. In 2019, all the programme's priorities were met. Preparations for Sentinel 6A, i.e. the eighth satellite, were completed. Construction and preparations for the launch and operations of the first Sentinel C and D units have proceeded as planned. All six core services and the seven satellites are fully operational. The stronger dissemination of Copernicus data and information means that the user base has further increased.
- International activities were pursued with old and new agreements. These aim at: (1) promoting the uptake of Copernicus data to maximise its value in addressing global challenges; (2) creating the conditions – based on reciprocity – for the integration of data and information acquired by international partners into the European Earth Observation data management system; and (3) facilitating international cooperation and access to international markets for European researchers and industry. As of the end of 2018, Copernicus cooperation arrangements had been signed with Australia, Brazil, Chile, Colombia, India, Serbia, Ukraine and the United States, and with the African Union Commission. In 2019, discussions were held on cooperation arrangements with Argentina, Canada, the Holy See, Japan, Panama, Thailand and Vietnam and with the Food and Agriculture Organization, the Indonesian Space Agency, the United Nations Environment Programme and the World Meteorological Organization. As a result, Copernicus's free, full and open data access is expected to reach about 50% of the world's population via a local data hub.

Performance assessment

- Copernicus is delivering on its objectives. Its monitoring capacities have been successfully deployed, thus providing autonomous EU access to environmental knowledge and giving the EU a major role at the international level. The six core services are all operational and provide the accurate and reliable level of geoinformation that was expected. The quality of the outputs is confirmed by the consistently growing uptake by registered users. In response to this surge, capabilities have been enlarged through the data and information access services.
- The 2019 Copernicus market report found that the programme's estimated benefits in the downstream market were between EUR 125 and 150 million in 2018, up from EUR 54 million in 2015. They are expected to grow by an average annual increase of 15% up to the end of 2020, with a progressive adoption of Earth observation-based solutions in some industries, such as renewable energies. Furthermore, 72% of downstream Earth observation sector enterprises use Copernicus data (an additional 6 percentage points compared to 2016).
- Regarding the objective of a competitive European space and services industry, the baseline scenario assumed a 5% annual growth rate between 2013 and 2020 in the European Earth observation sector due to Copernicus. Instead, the rate achieved in 2016–2018 was 14%, demonstrating Copernicus's positive effect.
- The international dimension has been reinforced through international agreements. With the conventional data access infrastructure (e.g. the European Space Agency open hub) and the creation of the Copernicus data and information access services, the entire Copernicus database is available on a free, full and open data basis to Global Earth Observation System of Systems members among others.
- The main challenge concerns the continuity of the operation. New satellites will have to be launched, to replace those that have reached the end of their life. Services may need to expand in response to user requirements in new areas such as agriculture, the development of coastal areas and the monitoring of polar regions.

Concrete examples of achievements

200 million GB	18 million	81	23	32 million	3 972
of data has been downloaded by more than 300 000 registered users and the amount is growing.	Sentinel 2 products are available online for download.	activations of the Copernicus emergency management service's rapid mapping component were recorded in 2019 for events including wild fires in Australia and forest fires in Greece and Italy.	biophysical parameters for products were delivered by the Copernicus land monitoring service to support the monitoring of vegetation, agriculture, energy, the cryosphere and the water cycle.	television viewers on different platforms watched daily air quality bulletins from around Europe based on the Copernicus atmosphere monitoring service in 2019.	Earth observation services were delivered in 2019, at the request of Copernicus maritime surveillance service users.

⁽⁸⁹⁾ A number of delegation agreements were signed with the European Organisation for the Exploitation of Meteorological Satellites and the European Space Agency for the space infrastructure, and six delegation agreements were signed with the European Border and Coast Guard Agency, the European Environment Agency, the European Maritime Safety Agency, the European Union Satellite Centre, the European Medium-Range Weather Forecasting Centre and Mercator-Océan for the services.

LEGAL BASIS

Regulation (EU) 2017/2396
of the European Parliament and of
the Council

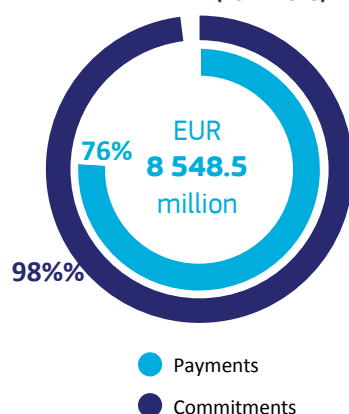
MORE INFORMATION

<http://europa.eu/!kD37xn>
<http://www.eib.org/efsi/index.htm>

FINANCIAL PROGRAMMING

(million EUR)

2015	1 360.5
2016	2 128.9
2017	2 661.1
2018	2 038.3
2019	186.9
2020	172.9
Total	8 548.5

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

An independent evaluation of the EFSI was carried out in 2018. For further information please consult: <https://europa.eu/!YK63VR>

How is it implemented?

DG Economic and Financial Affairs is the lead DG. The EFSI is implemented by the European Investment Bank Group and projects supported by it are subject to standard European Investment Bank procedures.

EFSI

EUROPEAN FUND FOR STRATEGIC INVESTMENTS

What is EFSI?

The European Fund for Strategic Investments (EFSI) is an initiative to help overcome the current investment gap in the EU. Jointly launched by the European Investment Bank Group and the European Commission, it aims to mobilise private investment in projects which are strategically important.

The EFSI is one of the three pillars of the investment plan for Europe that aims to revive investment in strategic projects around the continent to ensure that money reaches the real economy. The Juncker plan also includes the European Investment Advisory Hub and the European Investment Project Portal. The European Investment Advisory Hub offers a single access point to a 360-degree offer of advisory and technical assistance services to identify, prepare and develop investment projects across the European Union. The European Investment Project Portal is a meeting place for project promoters and investors providing visibility for investment projects. With EFSI support, the European Investment Bank Group is providing funding for economically viable projects, especially for projects with a higher risk profile than usually taken on by the Bank. The focus is on sectors of key importance for the European economy, including:

- strategic infrastructure, including digital, transport and energy;
- education, research, development and innovation;
- renewable energy and resource efficiency;
- support for small to medium-sized enterprises.

The EFSI started as a EUR 16 billion guarantee from the EU budget, complemented by a EUR 5 billion allocation of the European Investment Bank's own capital. These amounts were increased to EUR 26 billion and EUR 7.5 billion, respectively, by the EFSI 2.0 regulation. The total amount of EUR 33.5 billion aims to unlock an additional investment of at least EUR 500 billion by the end of 2020.

**Specific objectives**

- To increase the volume of European Investment Bank Group financing and investment operations in priority areas.
- To provide advisory support for investment project identification, preparation and development to public and private counterparts, not necessarily linked to EFSI operations, through the European Investment Advisory Hub.
- To create a publicly available web portal where EU-based project promoters will be given the opportunity to boost the visibility of their projects to potential international investors.

Why is it necessary?

The investment plan for Europe focuses on removing obstacles to investment, providing visibility and technical assistance to investment projects and making smarter use of new and existing financial resources. The EFSI aims to overcome current market failures by addressing market gaps and mobilising private investment. Action at the EU level will allow for economies of scale in the use of the EU budget funds in combination with the European Investment Bank Group financing by catalysing private investment in the whole of the EU and making best use of the European institutions and their expertise and knowledge for that purpose. The multiplier effect and the impact on the ground will thus be much higher

than could be achieved by an investment offensive in a single Member State or a group of Member States. In the past years, the EFSI has effectively increased access to financing and mobilised private capital: as of the end of December 2019, more than two thirds of investments came from private sources.









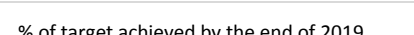
Outlook for the 2021-2027 period

Based on the positive experiences and successes of the EFSI, the Commission proposed a new investment support programme, called InvestEU. It will aim to address investment gaps for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
2 661.1	2017	2 467.2	2017
2 038.3	2018	1 979.0	2018
186.9	2019	1 022.9	2019

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Cumulative volume of investment mobilised under the EFSI (in billion EUR)		 92%	500B	458 out of EUR 500 billion
Number of projects to receive support under EFSI initiative		 > 100%	1 000	1 269 projects compared to a target of 1 000
Cumulative number of Member States receiving European Investment Bank Group financing under EFSI		 100%	28	28 out of 28 Member States
Multiplier effect		 > 100%	15	16 compared to a target of 15
Share of EFSI financing under the infrastructure and innovation window (project components that contribute to climate action)		 > 100%	40%	40% out of 40%
Projects for which European Investment Advisory Hub support has been requested has been requested ⁽¹⁾		 > 100%	1 000	1 547 projects compared to a target of 1 000
Number of projects receiving European Investment Advisory Hub support ⁽¹⁾		 > 100%	395	482 projects compared to a target of 395
Number of projects published on the European Investment Project Portal		 > 100%	500	956 projects compared to a target of 500
Member States represented on the European Investment Project Portal		 100%	28	28 out of 28 Member States

 % of target achieved by the end of 2019

⁽¹⁾ Cumulative results for 2014-2019 compared to cumulative milestones for 2014-2020.

Where are we in the implementation?

- On 30 December 2017 the regulation to extend and enhance the EFSI (EFSI 2.0) entered in force, extending the EFSI's lifetime to the end of 2020 and raising its investment target to EUR 500 billion.
- As of 31 December 2019, 1 269 EFSI projects have been approved by the European Investment Bank Group for a total investment value of EUR 458 billion. Therefore, of the target investment volume of EUR 500 billion by the end of 2020, 92% had already been mobilised by the end of 2019.
- Under the EFSI, the EU provides funding support through an EU guarantee of EUR 26 billion covering potential losses to the European Investment Bank. Cumulative provisioning amounts to EUR 8.4 billion at the end of 2019 with new commitments of EUR 187 million in 2019, which is low compared to previous years because the portfolio is now largely established.
- The EFSI is now coming close to the end of its investment period for approvals of operations that will end by 31 December 2020. Given the long-term nature of support under the EFSI, EU guarantee coverage and operational monitoring will continue until repayment of all supported financing and investment operations is complete.

Performance assessment

- The EFSI has supported investments by providing additional risk-bearing capacity to increase the volume of European Investment Bank financing and investment operations in priority areas, and for small to medium-sized enterprises. The EFSI is fully on track to meet the end-of-2020 target of unlocking additional investment of at least EUR 500 billion, and about 1 125 000 small to medium-sized enterprises are expected to benefit from it.
- The EFSI is providing EU added value by addressing market failures and by supporting riskier operations, which could not have not been carried out otherwise, or not to the same extent, by the European Investment Bank or under existing EU financial instruments. While financial market conditions have improved over the last few years, evidence suggests that significant market gaps and suboptimal investment situations remain. In particular, there are substantial market gaps for financing of small to medium-sized enterprises in terms of cost of finance and collateral requirements, and in areas related to climate action and sustainability. In addition, EFSI intervention in 2020 and beyond will be crucial due to the devastating economic impact of the COVID-19 crisis.
- The EFSI has achieved its objectives using a limited amount of resources. The EFSI effective multiplier ratio until 2019 is around 16: EUR 1 of the EU guarantee under this initiative generates approximately EUR 16 of investment in projects.
- The EFSI has slightly surpassed the 40% objective for climate action under the infrastructure and innovation window: as of the end of 2019, 40.2% of operations signed under the infrastructure and innovation window in 2019 contributed to climate action, providing focused support for climate-related projects like renewable energy and energy efficiency.
- One of the recommendations of the performance audit published by the European Court of Auditors in January 2019 was to improve the assessment of whether potential EFSI projects could be financed by other sources, in order to ensure that investment mobilised by EFSI is additional. The EFSI 2.0 regulation strengthens the criteria for ensuring the investment is additional by including a qualitative assessment of additionality by the European Investment Bank.
- In terms of geographical spread, as of 31 December 2019, the share of the top three Member States (France, Italy and Spain) accounted for 48% of signed EFSI financing and for 46% of investment mobilised by approvals. Both metrics are slightly above the indicative limit of 45% set out in the strategic orientation. A set of actions will be implemented until the end of 2020 to improve this situation, including the analysis of the specific situation of underrepresented Member States, and more targeted awareness-raising activities.

Concrete examples of achievements

8.5 million	531 000	10 million	31 million	95 million	15 million
jobs sustained and supported by help from the EFSI.	affordable flats built or renovated through EFSI investments.	additional households being powered by renewable energy through investments in generation.	people receiving better healthcare through improved health facilities and support for medical research.	passengers benefiting from improved transport through infrastructure investments.	additional households with high-speed internet.

LEGAL BASIS

Council Regulation (Euratom)
No 1368/2013

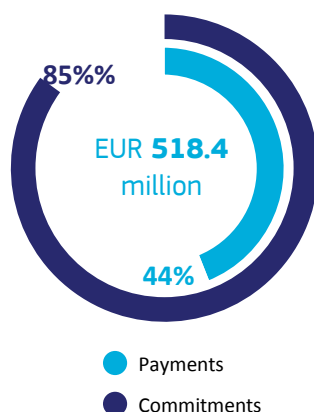
MORE INFORMATION

<https://europa.eu/!bC66CU>

FINANCIAL PROGRAMMING

(million EUR)

2014	69.7
2015	71.1
2016	72.6
2017	74.0
2018	75.5
2019	77.0
2020	78.5
Total	518.4

OVERALL EXECUTION
(2014-2019)Evaluations/
studies conducted

The midterm evaluation was carried out in 2018. For further information, please consult:
<https://europa.eu/!TN67UQ>

How is it implemented?

The Directorate-General for Energy is the lead DG for the implementation of the programme.

The programme is managed through the European Bank for Reconstruction and Development and the Member State national agencies.

NUCLEAR DECOMMISSIONING (BG AND SK)

NUCLEAR DECOMMISSIONING ASSISTANCE PROGRAMMES IN BULGARIA AND SLOVAKIA

What is nuclear decommissioning in Bulgaria and Slovakia?

When Bulgaria and Slovakia were candidates to join the European Union, the closure and subsequent decommissioning of six Soviet-designed, first-generation nuclear reactors at two nuclear power plant sites was made a condition for their accession. As part of the agreements, the EU declared its willingness to provide financial aid. The nuclear decommissioning assistance programmes were established to assist the Member States concerned in implementing the decommissioning of Kozloduy units 1 to 4 (Bulgaria) and Bohunice V1 units 1 and 2 (Slovakia) in accordance with their respective decommissioning plans, while maintaining the highest level of safety.



Specific objectives

- **Kozloduy.** Performing dismantling in the turbine halls of units 1 to 4 and in auxiliary buildings.
- **Kozloduy.** Dismantling of large components and equipment in the reactor buildings of units 1 to 4.
- **Kozloduy.** Safely managing the decommissioning waste in accordance with a detailed waste management plan.
- **Bohunice.** Performing dismantling in the turbine hall and auxiliary buildings of reactor V1.
- **Bohunice.** Dismantling of large components and equipment in the V1 reactor buildings.
- **Bohunice.** Safely managing the decommissioning waste in accordance with a detailed waste management plan.

Why is it necessary?

Due to the early closure of their plants, it was not possible for Bulgaria and Slovakia to accumulate sufficient funds from operation of the plants. It is therefore in the interests of the EU to provide financial support for the seamless continuation of decommissioning in order to progress towards the decommissioning end state, in accordance with approved plans, while keeping the highest level of safety. This will contribute to providing substantial and sustained support for the health of workers and the general public, preventing environmental degradation and providing for real progress in nuclear safety and security.

Outlook for the 2021-2027 period

The Commission proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
74.0	2017	90.7	
75.5	2018	74.9	
77.0	2019	62.2	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Kozloduy – metal from dismantling in reactor buildings (in tonnes)		<div><div></div></div> 60%	1 200	723 out of 1 200
Kozloduy – quantity and type of safely conditioned waste (in tonnes)		<div><div></div></div> 79%	43 860	34 678 out of 43 860
Bohunice – quantity and type of safely conditioned waste (in tonnes)		<div><div></div></div> 88%	149 297	131 736 out of 149 297

■ % of target achieved by the end of 2019

Where are we in the implementation?

- EUR 77 million was made available in 2019 for the implementation of the actions in Bulgaria and Slovakia.
- In total, EUR 364.4 million was allocated from 2014 to 2019.

Performance assessment

- The overall progress of the nuclear decommissioning objectives is satisfactory so far, and shows an ongoing upward trend based on indicator results.
- Synergy effects and knowledge dissemination between the two decommissioning sites have become more important, leading to increased efficiencies and savings. For example, in 2019 the feasibility of decontaminating the primary circuits at Kozloduy was confirmed on the basis of experience from Bohunice. The transportation to Kozloduy of decontamination equipment used at Bohunice was then prepared with a view to decontaminating the primary circuits in 2020.
- Decommissioning of the Kozloduy power plant in Bulgaria has shown largely satisfactory progress.
 - The dismantling of equipment in the turbine hall, a major milestone of the first specific objective, was completed in August 2019, a year earlier than scheduled.
 - The plasma melting facility, a first-of-its-kind facility for the high-performance volume reduction of radioactive waste, began operations in November 2018, and continued with the support of the system provider until the end of 2019.
 - The dismantling of large components in the reactor building, where the nuclear core was housed, remains behind schedule due to the delay in the 2015–2017 period. This impacts the corresponding indicator, but progress as measured by recent results in 2018 and 2019 is showing a positive trend.
- The Bohunice programme in Slovakia progressed very well.
 - An important milestone was reached in the decommissioning programme as the dismantling of large components in the reactor building began in 2019.
 - Dismantling in the turbine halls and auxiliary buildings was completed under budget.
 - Far-reaching mitigating measures were taken to maintain the programme's end date at 2025, overcoming a 10-month delay in starting major contracts caused by difficulties in developing specifications suited to a concentrated decommissioning market. The most important measure consists of further optimising the planning of the demolition of the buildings on-site, which is the final stage in the decommissioning process.
- Technical challenges remain for both locations, for example due to physical interfaces between concurrent projects imposed by the limited space available in the reactor hall. Further, delays had increased during regulatory approval processes in both countries (Bulgaria and Slovakia). However, the programmes' critical path is monitored with the highest level of attention. When risks are identified, mitigating actions like the parallel execution of tasks or working in several shifts are proposed, so that at this point in time the end dates for both locations (Kozloduy 2030, Bohunice 2025) remain the same.

Concrete examples of achievements

At Kozloduy	At Bohunice
the dismantling of the turbine hall was completed in August 2019, a year earlier than expected. The operator finalised the first operational campaign of the plasma melting facility, a first-of-its-kind facility for the high-performance volume reduction of radioactive waste.	all 12 steam generators, weighing 145 tonnes each, have been removed from the reactor building and prepared for dismantling, with the pressurisers cut up by the end of 2019. With the exception of the nuclear reactor vessel itself, they are the biggest pieces of equipment present in the plant. Disposal capacity for low-level waste, representing over 90% of total radioactive waste by volume, was extended by around 30%.

LEGAL BASIS

Council Regulation (EU)
No 1369/2013 and repealing
Regulation (EC) No 1990/2006

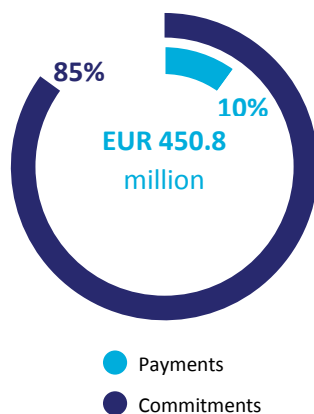
MORE INFORMATION

<http://europa.eu/ljw46Rk>

FINANCIAL PROGRAMMING

(million EUR)

2014	60.6
2015	61.9
2016	63.1
2017	64.4
2018	65.6
2019	67.0
2020	68.3
Total	450.8

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The mid-term evaluation was carried out in 2018. For further information, please consult: <https://europa.eu/TN67UQ>

How is it implemented?

The Directorate-General for Energy is the lead DG for the implementation of the programme.

The programme is managed through the European Bank for Reconstruction and Development and the Member State's national agency.

NUCLEAR DECOMMISSIONING LT

NUCLEAR DECOMMISSIONING ASSISTANCE PROGRAMME IN LITHUANIA

What is nuclear decommissioning in Lithuania?

When Lithuania was a candidate country to join the EU, the closure and subsequent decommissioning of two Soviet-designed, first generation nuclear reactors at Ignalina was made a condition for its accession. As part of the agreement, the EU declared its willingness to continue to provide adequate additional Community assistance to Lithuania's decommissioning efforts. The nuclear decommissioning assistance programme was established to assist Lithuania in implementing the decommissioning of Ignalina units 1 and 2 in accordance with an approved decommissioning plan, whilst maintaining the highest level of safety.

**Specific objectives**

- Defueling of the reactor core of unit 2 and the reactor fuel ponds of units 1 and 2 into the dry spent fuel storage facility.
- Safely maintaining the reactor units.
- Performing dismantling in the turbine hall and other auxiliary buildings and safely managing the decommissioning waste in accordance with a detailed waste management plan.

Why is it necessary?

Due to the early closure of its plants, it was not possible for Lithuania to accumulate sufficient funds from the operation of the plant. It is therefore in the EU's interests to provide further financial support for the seamless continuation of decommissioning in order to progress towards the so-called decommissioning end state, in accordance with approved plans, while maintaining the highest level of safety. This will help to provide substantial and sustained support for the health of workers and the general public, prevent environmental degradation and enable real progress in nuclear safety and security.

Outlook for the 2021-2027 period


The Commission proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
64.4	2017	2.5	
65.6	2018	8.4	
66.9	2019	32.9	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Fuel assemblies transported to dry interim storage (in tonnes)		<div><div></div></div> 88%	13 984	12 255 out of 13 984 number of assemblies
Unloaded fuel assemblies from reactor core of unit 2		<div><div></div></div> 100%	1 134	1 134 out of 1 134 number of assemblies
Registered incidents		<div><div></div></div> 100%	0	0 incidents
Auxiliary system dismantled and safely conditioned waste - dismantled equipment (in tonnes)		<div><div></div></div> 98%	40 454	39 767 out of 40 454 tonnes
Auxiliary system dismantled and safely conditioned waste - Primary processed waste (in tonnes/m ³)		<div><div></div></div> 80%	42 314	33 894 out of 42 314 tonnes/m ³

 % of target achieved by the end of 2019

Where are we in the implementation?

- In total, EUR 381 million was allocated in 2014-2019.
- EUR 66.9 million was available in 2019 for the implementation of the actions in Lithuania. Decommissioning programmes are characteristically long term by nature and the preparation time for individual projects is also typically several years and this is reflected in the implementation rate.

Performance assessment

- The programme's performance is satisfactory, as confirmed by the objectives' indicator results.
- The cores of both reactor units 1 and 2 are now completely defueled – a result achieved in 2018, ahead of schedule.
- The removal of spent fuel assemblies from unit 1 and 2 spent fuel ponds is also ahead of schedule. The removal of spent fuel assemblies has reached up to 12 255 assemblies i.e. 87% of the cumulative planned amount in 2020 and 78% of the total amount planned for 2022 (15 555 assemblies). Spent-fuel assemblies were safely stored in the new dedicated interim spent fuel storage facility.
- No incidents were reported during the decommissioning works, demonstrating the programme's effective safety measures.
- The overall performance concerning the dismantling of auxiliary systems was satisfactory. The amounts of equipment dismantled and the overall quantity of radioactive waste processed and stored were slightly below the planned amounts of 2019 and reached respectively 84% and 80% of the cumulative planned amounts in 2020.
- Output material flow and waste processing is slightly behind its expected value for 2019, but shows a continuous positive trend and remains within what was planned.
- Appeals against the results of tendering procedures, even if eventually rejected, have led to delays in several non-critical projects. This does not affect the programme's projected end date (2038), which is maintained.

Concrete examples of achievements

50 000	Waste management	78%
tonnes of material were dismantled in the turbine hall, a task completed in August 2019. The large hall is now used to store and process materials from other buildings.	has seen improvements: the construction of the landfill facility for very low level waste was completed in 2019, and the first loading campaign is scheduled for the second half of 2020.	of spent fuel assemblies had been safely transferred by the end of 2019. Preparations were ongoing for the handling of heavily damaged fuel elements and the cleaning up, emptying and decontamination of the spent fuel pools.

LEGAL BASIS

Regulation (EU) No 1291/2013 of the European Parliament and of the Council and repealing Decision No 1982/2006/EC
Council Decision 2013/743/EU

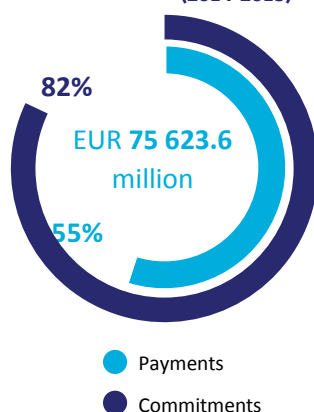
MORE INFORMATION

<http://europa.eu/!gW68pY>

FINANCIAL PROGRAMMING

(million EUR)

2014	9 023.1
2015	9 539.4
2016	9 542.5
2017	10 423.9
2018	11 217.2
2019	12 391.5
2020	13 485.9
Total	75 623.6

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The interim evaluation of Horizon 2020 was carried out in 2017. For further information please consult:
<http://europa.eu/!pm48VY>

How is it implemented?

The Directorate-General for Research and Innovation is the lead DG for the implementation of the programme, and 10 other DGs are also involved. The programme is implemented through direct grants, procurements, prizes, direct actions of the Joint Research Centre, delegation agreements (eight public-private partnerships, five public-public partnerships, four executive agencies), financial instruments (European Investment Bank, European Investment Fund) and through the European Institute of Innovation and Technology.

HORIZON 2020

THE FRAMEWORK PROGRAMME FOR RESEARCH AND INNOVATION

What is Horizon 2020?

Horizon 2020 is the largest EU research and innovation programme ever. It aims to help bring about more breakthroughs, discoveries and world firsts by taking great ideas from the laboratory to the market. Investment in research and innovation is essential for Europe's future. The goal is to ensure that Europe produces world-class science and technology, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering solutions to big challenges facing our society.

Horizon 2020 consists of three main pillars:

- excellent science – producing and promoting world-class science in Europe;
- industrial leadership – boosting the EU's economic competitiveness;
- societal challenges – finding solutions to the big challenges facing our society.

**Specific objectives**

- Excellent science.
- Industrial leadership.
- Societal challenges.
- Spreading excellence and widening participation.
- Science with and for society.
- Non-nuclear direct actions of the Joint Research Centre.
- The European Institute of Innovation and Technology.

Why is it necessary?

Research and innovation are public goods with a strong European dimension. EU investments in these areas leverage additional funds at national level (without evidence of substitution). Due to their ambition, most of the EU-funded projects would not have gone ahead with national or regional funding alone. The main benefits of EU investments are:

- boosting EU competitiveness through the creation of transnational and multidisciplinary networks and markets, with positive knowledge spill-overs and technology transfer across the EU;
- pooling public and private resources and knowledge to achieve a critical mass for tackling global challenges and for assuming leadership;
- strengthening scientific excellence through EU-wide competition and cooperation;
- increasing the EU's attractiveness as a place for education, research, innovation and business (EU funding supports over 300 000 researchers and innovators);

- leveraging private investment;
- having a positive structuring effect on national research and innovation ecosystems.

Horizon 2020 plays a central role in the delivery of Europe's political priorities, such as the European Green Deal. It provides a common strategic framework for the EU's research and innovation funding, thus acting as a vehicle for leveraging private investment, creating new job opportunities and ensuring Europe's long-term sustainable growth and competitiveness.










Outlook for the 2021-2027 period

Building on the success of Horizon 2020, the Commission proposed a new programme called Horizon Europe for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
10 422.4		2017	8 503.7
11 214.4		2018	8 695.2
12 391.1		2019	10 421.5

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Share of European Research Council-funded publications among the top 1% cited		 >100%	1.8%	7.0% compared to 1.8%
Cross-sector and cross-country circulation of researchers		 90%	65 000	58 200 out of 65 000 researchers
Cross-sector and cross-country circulation of PhD candidates		 88%	25 000	22 200 out of 25 000 PhD candidates
Researchers who have access to research infrastructures		 >100%	20 000	49 645 compared to 20 000 researchers
Total investment mobilised via debt financing and venture capital investments (in EUR billion)		 >100%	15B	54 compared to EUR 15 billion
Amount of private funds leveraged (in EUR billion)		 82%	35 b	29 compared to EUR 35 billion
Research activities: renewable energy, end-user energy efficiency, smart grids and energy storage activities		 >100%	85%	89% compared to 85% the research activities
Number of peer reviewed publications in high-impact journals - direct research		 92%	3 360	3 111 out of 3 360 publications
Collaboration inside the knowledge triangle leading to the development of innovative products, services and processes ⁽¹⁾		 60%	600	359 out of 600 start-ups and spin-offs

■ % of target achieved by the end of 2019

⁽¹⁾ Latest results from 2018.

Where are we in the implementation?

- By February 2020, 228 411 eligible proposals had been submitted for the period 2014-2020, requesting a total EU financial contribution of EUR 363.9 billion. Of these, 27 488 proposals were retained for funding, bringing the overall success rate of eligible full proposals in the first 5 years to 12%, with a total budget allocation of EUR 50.5 billion in EU funding.
- For the 2020 work programme, the five major priorities identified are: increased investment in sustainable development and climate-related research and innovation; integrating digitisation in all industrial technologies and societal challenges; strengthening international research and innovation cooperation; societal resilience; and market-creating innovation.
- Particular attention is given to initiatives in key areas like the digital single market (high-performance computing, information and communication technologies, small and medium-sized enterprises), the energy union, mobility (batteries), space and the circular economy, including work on plastics.
- Building on the additional funding allocated to climate objectives under Horizon 2020 in 2020, a total budget of around EUR 1 billion will be dedicated to European Green Deal-related calls. This amount is over and above the EUR 1.3 billion already envisaged for 2020, providing a total of around EUR 2.3 billion of Horizon 2020 funding allocated to clean-technology research and innovation in 2020.
- In addition, Horizon 2020 has shown its ability to react quickly to major events. In response to the COVID-19 pandemic, it mobilised more than EUR 1 billion in total (EUR 307 million in ongoing projects and EUR 715.5 million for new actions). The financing comes from the reprogramming of research and innovation activities across all Commission services. This enabled the immediate redeployment of significant resources for COVID-19 actions, while keeping the level of ambition for the European Green Deal call (EUR 1 billion).

Performance assessment

- In its 6th year of implementation, Horizon 2020 performed solidly. While in the early years of implementation it was only possible to observe its direct output (number of grants, excellence of proposals), the programme is now demonstrating its first outcomes and results (patents awarded, highly cited research). The very long policy cycle of research and innovation also means long procedures for papers to be published and actively cited, and for patents to be awarded. Therefore, only in recent years has the programme been able to show increasingly good results. Horizon 2020's synergies with other programmes (e.g. support for the development of applications of Copernicus) and its ability to direct funds to the most significant health crises (e.g. coronavirus, Ebola, Zika) and political priorities (the European Green Deal) make the programme's flexibility one of its positive features.
- The pillar of excellent science is likely to meet its targets. Horizon 2020 is succeeding in attracting and involving the best research institutions and researchers in the EU and in the world. Since 2014, 5 522 high-quality research projects have been funded by the European Research Council via Horizon 2020. The share of publications from these projects that feature among the top 1% of citations remains high, at about 7%, considerably exceeding the target of 1.8% (indicator 1). Thanks to Horizon 2020 support, researchers in the EU and beyond have obtained access to many national research infrastructures: 49 645 researchers have had access to e-research infrastructure and 8 534 researchers have had remote or physical access to research infrastructure (indicator 4).
- The actions under the industrial leadership pillar are progressing well. The projects in the 'leadership in enabling and industrial technologies' strand have already produced numerous outputs, such as patents (308 applications and 212 awarded); more than 5 700 public-private publications; and innovations by 15 434 firms with the potential to generate scientific breakthroughs. Under the access to risk finance programme, more than 23 000 organisations have been funded. This is above the target of 5 000, with EUR 29 billion of private funds leveraged. Total investments mobilised via debt financing and venture capital investments stand at EUR 54 billion (indicators 5 and 6), confirming the high quality of the projects selected and the market attractiveness.
- The progress of the societal challenges pillar is encouraging, having already generated more than 6 000 high impact peer-reviewed publications; about 5 200 public-private publications; 700 patent applications (not yet awarded) and 344 patents awarded; and 44 000 innovations that include prototypes and testing activities.
- In 2019, 303 tangible specific impacts on European policies resulting from technical and scientific support were reported by the Joint Research Centre, which generated 522 peer-reviewed publications in high-impact journals. This exceeds the target of 500 for peer-reviewed publications and almost reached the yearly target of 330 for specific impacts, while delivering successfully on EU priorities (indicator 8).
- The performance of the joint undertakings set up under Horizon 2020 is in general be considered to be positive, as reported by the European Court of Auditors in its annual report on EU joint undertakings for 2018. However, they were advised to improve the link between research and societal growth, and bring innovation closer to the market. The Court of Auditors confirmed that the joint undertakings' financial management is healthy, but said that in-kind contributions, internal control, grant management and staff turnover need to be improved.

- As far as the European Institute of Innovation and Technology is concerned, 1 650 university, business and research organisations are integrated in the knowledge and innovation communities, above the target of 1 200. Collaboration within the knowledge triangle leading to the development of innovative products, services and processes is on track to achieve its innovation target and slightly behind in meeting the start-up and spin-off target (indicator 9).
- The tracking of expenditure for climate change shows that this had fallen below the expectations. This is due to the bottom-up parts of Horizon 2020, since their content is unpredictable in nature, and can be difficult to assess at the time of the research. However, a call with a budget of EUR 1 billion dedicated to the European Green Deal will be launched in 2020. This will considerably raise the level of expenditure on climate action.
- To reinforce and facilitate knowledge sharing and evidence-based policymaking, the programme's common support centre has developed a dashboard that provides reporting on 18 of the 23 Horizon 2020 indicators. The dashboard is open to all and provides more transparency in the spending of the EU's research and innovation budget (<https://europa.eu/!DF83FM>).
- The next programme, Horizon Europe, will tackle some of the known issues related to performance, such as the lack of interdisciplinarity and the need to increase the focus on innovation.
- The mission-driven approach will tackle the key societal challenges with a more holistic approach, linking these challenges to a broad range of stakeholders as well as to citizens, supporting wider outreach for the programme and creating synergies among the different sectors involved. The five mission areas are: adaptation to climate change including societal transformation; cancer; healthy oceans, seas and coastal and inland waters; climate-neutral and smart cities; and health, soil and food.
- The European Innovation Council is another key new feature of Horizon Europe, building on the experience gained with the pilot under Horizon 2020; it will be a one-stop shop for innovation to bring the most promising ideas and breakthrough innovations from the laboratory to real-world application and to help the most innovative start-ups and companies to scale up. An enhanced pilot phase was launched in March 2019. It introduces targeted calls for future and emerging technologies under the 'pathfinder pilot', employing external programme managers for the flexible management of the portfolio of projects, and the possibility of applying for blended finance (a combination of grant and equity) under the 'accelerator pilot'.

Concrete examples of achievements

7	58 200	49 645	136 935	1 857	138 055	EUR 13 billion
Nobel Prizes have so far been funded by the European Research Council.	researchers supported by the Marie Skłodowska-Curie actions dedicated to cross-sector and cross-country mobility of researchers.	researchers have access to research e-infrastructures through the programme, and 8 325 researchers have access to research infrastructures.	publications in peer reviewed journals, of which 24 725 public-private publications; and 43 530 in peer reviewed high impact journals.	patents applications (not awarded) after receiving financing from the programme and 771 patents awarded.	prototypes, clinical trials and testing activities supported by the programme.	in private funds has been leveraged by the programme.

- With the support of the European Research Council, the National Observatory of Athens and the Greek government, a climate change superstation has been built on a remote island at the edge of the Aegean Sea and is increasingly serving as a main reference point for climate, energy and weather research in the eastern Mediterranean.
- The 2019 Nobel Prize in Physiology or Medicine was awarded to Professors Kaelin, Ratcliffe and Semenza 'for their discoveries of how cells sense and adapt to oxygen availability'. Sir Peter J. Ratcliffe is the seventh European Research Council-funded researcher to be awarded a Nobel Prize to date. The project provided a detailed structural and chemical characterisation of human hydroxylase enzymes, and also led to the development of inhibitors of these enzymes. Modulating how cells respond to hypoxia could in the future be of therapeutic use in ischaemic disease and cancer.
- On 10 April 2019, the Commission released the first ever image of a black hole taken by the Event Horizon Telescope, a global scientific collaboration involving EU-funded scientists. This major discovery provides visual evidence for the existence of black holes and pushes the boundaries of modern science, thanks to its state-of-the-art technique.
- The TAPP water project received a phase 2 grant from the European Innovation Council small and medium-sized enterprise instrument programme to further enhance tap water quality and potentially reduce plastic bottle waste by 2 billion bottles per year.
- The EU is committed to supporting research in the health sector. Through research related to the molecular characteristics of stem cells, the [Brecastem](#) project aims to develop new treatments and more targeted therapies related to breast cancer. [EpiPredict](#) has mapped the systems behaviour of breast cancer cells after hormone treatment. Meanwhile, the [Inther](#) project has developed an innovative device to deliver minimally invasive immunostimulating interstitial laser thermotherapy (imILT). The therapy works by attacking the tumour directly and stimulating the patient's own immune system to attack other (same-type cancer) tumours. The [MammaPrint](#) project, following on from two previous framework programme for research and technological development 6 and 7 projects, has analysed the entire genome of patients and further validated a molecular signature that could be associated with cancer recurrence.
- Horizon 2020 projects related to food highlight how our ecosystems contribute to sustainable production, food security, safety and healthy and sustainable nutrition in the EU (and globally) and how they deliver on the main EU policies. The Diversifood project has evaluated and enriched the diversity of cultivated plants within a range of agroecosystems to increase their performance, resilience, quality and use by studying underutilised and forgotten plant species for organic and low-input agriculture. The Sufisa project has identified sustainable practices and policies in the agricultural, fish and food sectors that support the sustainability of primary producers in a context of multidimensional policy requirements, market uncertainties and globalisation.
- Horizon 2020 projects address technology development and market barriers and accelerate the uptake of renewable energy technologies. On a regional basis, [CoolHeating](#) supported the implementation of small modular heating and cooling grids in south-eastern Europe using an improved business strategy and innovative financing schemes. The [BestRES](#) project explored the aggregation of various distributed renewable energy sources. The development of bioenergy villages requires investment stage bioenergy concepts. [BioVill](#) developed such villages in Croatia, North Macedonia, Serbia, Slovenia and Romania to a point where they could cooperate with established markets in Germany and Austria. LIFES 50plus focused on floating 5-10-MW wind turbines installed at water depths from 50 m to about 200 m.
- The Spider project (cyberSecurity Platform for virtualised 5G cyBErRange services) aims to provide an innovative cyber-range platform with the latest 5G virtualisation, infrastructure management and orchestration technologies. It seeks to use state-of-the-art artificial intelligence and machine learning-based technologies capable of assessing the security of critical virtualised communication infrastructures, and to integrate improved risk analysis and econometric models that can support organisations in making optimal cybersecurity investment decisions. The Spider virtual environment will be also used to train information security professionals to deal with real-world 5G security incidents.

LEGAL BASIS

Council Regulation (Euratom)
2018/1563, and Council
Regulation (Euratom) No
1314/2013

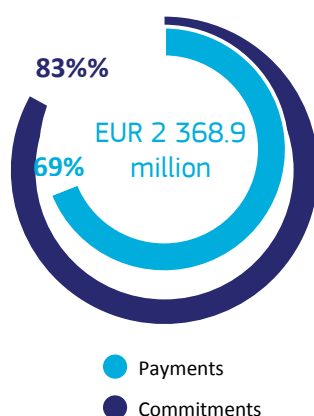
MORE INFORMATION

<http://europa.eu/lnj69xp>
<http://europa.eu/IHW64Gy>

FINANCIAL PROGRAMMING

(million EUR)

2014	284.8
2015	302.1
2016	317.1
2017	340.8
2018	352.9
2019	373.6
2020	397.7
Total	2 368.9

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The interim evaluation of the 2014-2018 Euratom programme was carried out in 2017 (COM(2017) 697). For further information please consult: <http://europa.eu/pm48VY>

How is it implemented?

The Directorate-General for Research and Innovation is the lead DG for the implementation of the programme together with the Joint Research Centre.

EURATOM RESEARCH

EURATOM RESEARCH AND TRAINING PROGRAMME

What is the Euratom research and training programme?

The objectives of the Euratom research and training programme are to pursue and support research on all aspects of nuclear safety and security, reducing risks associated with radiation exposure from medical or industrial applications and supporting emergency preparedness and response in relation to accidents involving radiation. The programme also aims to continue to support the development of fusion energy, a potentially inexhaustible and climate-friendly energy source in view of its potential major impact in contributing to the decarbonisation of the energy mix. The programme will work towards solutions for the management and disposal of spent fuel and radioactive waste, and for nuclear decommissioning. The Euratom programme provides scientific and technical support for the implementation of EU policy in the field of nuclear safeguards, non-proliferation and nuclear security. Funding is also provided for the basic research necessary for the development of reference measurements, materials and data.

**Specific objectives****FOR INDIRECT ACTIONS:**

- To support the safety of nuclear systems.
- To contribute to the development of solutions for the management of ultimate nuclear waste.
- To support the development and sustainability of nuclear competences at EU level.
- To support radiation protection and the development of medical applications of radiation, including the secure and safe supply and use of radioisotopes.
- To move towards demonstrating the feasibility of fusion as a power source by exploiting existing and future fusion facilities.
- To lay the foundations for future fusion power plants by developing materials, technologies and conceptual designs.
- To promote innovation and industrial competitiveness.
- To ensure the availability and use of research infrastructures of pan-European relevance.

FOR DIRECT ACTIONS:

- To improve nuclear safety including: nuclear reactor and fuel safety, waste management, decommissioning and emergency preparedness.
- To improve nuclear security including: nuclear safeguards, non-proliferation, combating illicit trafficking and nuclear forensics.
- To increase excellence in the nuclear science base for standardisation.
- To foster knowledge management, education and training.
- To support the EU's policy on nuclear safety and security.

Why is it necessary?

The Euratom programme's main added value is the mobilisation of a wider pool of excellence and multidisciplinary competencies in the nuclear field than is available at the level of individual Member States. Nuclear and ionising radiation technologies play an important role in the lives of EU citizens, whether this concerns energy and its security of supply or the use of radiation and radionuclides in medical and industrial applications. Safe and secure use of these technologies is of paramount importance and research programmes help to maintain the highest safety, security and safeguarding

standards in this field. The direct actions of the Euratom programme complement national research programmes; provide essential scientific and technical support to the Commission in the preparation, implementation and monitoring of EU policies and to fulfil its legal obligations and competences; support standardisation; and provide training in the fields of its objectives.








Outlook for the 2021-2027 period

The Commission has proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
340.8		2017	320.6
352.9		2018	271.1
370.8		2019	330.3

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Projects in nuclear safety leading to a demonstrable improvement in nuclear safety practice in Europe ⁽¹⁾			44	47 compared to 44 projects
Projects contributing to the development of safe long-term solutions for the management of ultimate nuclear waste			14	12 out of 14 projects
Fellows and trainees in the Euratom fusion programme			50	32 out of 50 fellows and trainees
Publications in peer-reviewed high-impact journals			800	822 compared to 800 publications
Fusion roadmap's milestones reached ⁽¹⁾			90%	82% compared to 90% milestones
Direct actions' scientific productivity ⁽²⁾			435	332 out of 435 occurrences
Technical and scientific policy support provided by the Joint Research Centre ⁽²⁾			1 164	993 out of 1 164 occurrences

■ % of target achieved by the end of 2019

⁽¹⁾ Latest results from 2018.

⁽²⁾ Cumulative results for 2014-2019.

Where are we in the implementation?

Indirect actions

- In fission research, four calls for proposals were concluded and 192 eligible proposals were submitted, requesting a Euratom financial contribution of EUR 726 million. Of these, 62 were selected for funding, with a Euratom contribution of EUR 271 million. A fifth call for proposals was closed in September 2019. A total of 62 eligible proposals were submitted, requesting a Euratom financial contribution of EUR 265 million. After evaluation, the Commission recommended 31 proposals for funding, with a Euratom contribution of EUR 133 million. The grants should be signed in 2020.
- For fusion research, following adoption by the Council of the regulation on the Euratom research and training programme for 2019-2020, the EUROfusion grant was extended until the end of 2022. The extension of the duration beyond 2020 will provide a smooth transition to the future Euratom programme.

Direct actions

- The work programme of the Joint Research Centre covered research and training in all the areas defined by the specific objectives of the programme.

Performance assessment

- The indirect actions in fission research are making progress towards achieving the objectives of supporting the safety of nuclear systems and developing solutions for nuclear waste, which are fundamental for the transition of the EU economy towards a sustainable future. This is confirmed by the number of projects likely to lead to an improvement in nuclear safety practices in Member States and in the management of nuclear waste (indicators 1 and 2).
- The Euratom programme has also made substantial scientific and technological progress in all roadmap missions aimed at demonstrating the feasibility of fusion as a future energy source. The first priority of the programme in this area was to provide scientific support for the ITER construction and its future exploitation. The new organisational structure established in 2014, involving all national fusion laboratories in Europe, has created the conditions for implementing a joint programme in line with the European fusion roadmap (indicators 3, 4 and 5). Delays were encountered in a few projects, due to the nature and unpredictability of cutting-edge scientific research.
- The results achieved by the direct actions of the Euratom programme are encouraging. The Joint Research Centre has been successfully supporting the Commission in its policymaking activities through research related to the overarching political priorities. However, due to the length of the approval cycle in peer-reviewed publications (indicator 5), the indicators for 2019 do not yet capture the whole picture and show fewer results than the consolidated numbers for the previous years (indicator 6).

Concrete examples of achievements

1 350 researchers	822 articles	750 PhD students
had access to advanced research infrastructures through the EUROfusion consortium.	were published in 2019 in peer-reviewed high-impact journals thanks to the support of the Euratom programme.	were supported in fusion physics and technology through the EUROfusion consortium.

- Euratom's support for the new European joint programme on radioactive waste management represents a step change in European collaboration towards safe radioactive waste management, including disposal.
- The Harmonic (health effects of cardiac fluoroscopy and modern radiotherapy in paediatrics) project was launched in 2019 with 24 partners from 11 Member States, Switzerland and Ukraine in order to study the long-term health consequences of radiological and radiotherapeutic procedures on children and adolescents. The project will develop tools and guidelines to guide treatments towards a reduction of patient doses in paediatric cardiology and oncology.
- In 2019, under the direct actions, Joint Research Centre scientists published 98 articles and conference contributions in peer-reviewed periodicals, including 12 related to radioactivity in the environment and 16 related to medical applications of nuclear science, and 37 articles in monographs or other periodicals. The Joint Research Centre organised 25 training events for professionals and students from Member States and Commission services. In addition, it produced 106 technical reports, contributed to nine policy documents analysing the implementation of the nuclear waste directive and the radioactive waste shipment directive, and contributed to the impact assessment of dual-use export control measures. Eleven reference methods and measurements were delivered, as were 13 technical systems and six scientific databases including essential outputs for the Euratom nuclear safeguards system.

LEGAL BASIS

Regulation (EU) No 1287/2013 of the European Parliament and of the Council

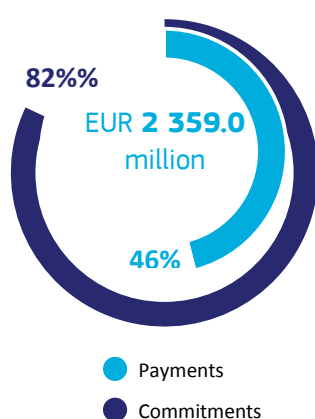
MORE INFORMATION

<http://europa.eu/ing64Kw>

FINANCIAL PROGRAMMING

(million EUR)

2014	254.1
2015	304.1
2016	311.9
2017	349.4
2018	354.2
2019	367.2
2020	418.1
Total	2 359.0

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

An interim evaluation of the programme for the competitiveness of enterprises and small and medium-sized enterprises (2014-2020) was carried out in 2017. For further information please consult: <http://europa.eu/!RD83Xc>

How is it implemented?

The Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs is the lead DG for the implementation of the programme. The programme is implemented by means of direct (grants and procurement) and indirect management through the European Investment Fund.

COSME

PROGRAMME FOR THE COMPETITIVENESS OF ENTERPRISES AND SMALL AND MEDIUM-SIZED ENTERPRISES

What is COSME?

COSME is the EU programme for the competitiveness of enterprises and SMEs.

With a total budget of EUR 2.3 billion, COSME contributes to strengthening the competitiveness and growth of companies in the EU. Tailored principally to small and medium-sized enterprises, the programme eases access to finance; delivers business advisory services to support access to markets and internationalisation; and promotes a better business environment and entrepreneurship.

Thanks to an extensive network of intermediaries, it ensures proximity with SMEs, the target beneficiaries of the programme.

COSME is an essential tool to implement both the SME strategy for a sustainable and digital Europe and the new industrial strategy for Europe. It will also contribute to the Green Deal and the digitalisation agenda.

**Specific objectives**

- To improve framework conditions for the competitiveness and sustainability of EU enterprises, particularly SMEs, including in the tourism sector.
- To promote entrepreneurship and an entrepreneurial culture.
- To improve access to finance for SMEs in the form of equity and debt.
- To improve access to markets, particularly within the EU but also at the global level.

Why is it necessary?

The additional value of action at the EU level relies on the following four main sources.

- Strengthening the single market by overcoming market fragmentation in areas such as venture capital investment, cross-border financing and credit enhancement, along with informational and organisational constraints that prevent SMEs from taking advantage of the opportunities that the single market offers.
- Demonstration and catalytic effects through the dissemination of industrial and policy best practices.
- Economies of scale in areas where it would be difficult for individual Member States to achieve the required critical mass.
- Coherence and consistency in national measures through benchmarking and the exchange of best practices at the EU level.

Outlook for the 2021-2027 period

The Commission proposed to include this programme within the new single market programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
349.4		2017	223.5
354.2		2018	203.3
367.2		2019	241.9

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Tourism – number of destinations adopting sustainable tourism development models promoted by the European Destination of Excellence ⁽¹⁾	98	<div><div></div></div> 59%	200	158 out of 200
Loan Guarantee Facility – volume of debt financing mobilised		<div><div></div></div> > 100%	14.3 b	EUR 31.7 billion, compared to a target of EUR 14.3 billion
Loan Guarantee Facility – number of firms benefiting from debt financing		<div><div></div></div> > 100%	220 000	553 925, compared to a target of 220 000
Enterprise European Network – number of partnership agreements signed ⁽²⁾	2 295	<div><div></div></div> 93%	17 500	16 214 out of 17 500

% of target achieved by the end of 2019

⁽¹⁾ Latest results from 2018. Since 2011 the selection of European Destinations of Excellence has taken place every second year, in alternation with a year dedicated to the promotion of the destinations that have received the award. For 2019, around 176 European Destinations of Excellence were expected to receive the award.

⁽²⁾ Cumulative results for 2015-2019 are 14 695 under COSME. 16 214 includes those agreements signed in 2014 under the previous programme.

Where are we in the implementation?

- The COSME Loan Guarantee Facility has been enhanced with support from the European Fund for Strategic Investments. By the end of 2019 an additional risk-bearing capacity of EUR 1.3 billion had been created, including for transactions related to a digitalisation pilot launched during that year.
- As of 31 December 2019, the European Investment Fund had invested in 17 funds through the Equity Facility for Growth, for a total investment amount of EUR 242 million. Of these funds, six were multi-stage funds combined with the InnovFin Equity Facility for early stage financing, which was set up under Horizon 2020.
- In 2019 the Enterprise Europe Network's services are expected to have reached 250 000 SMEs. With organisations from Kosovo ⁽⁹⁰⁾ having joined the network, it now covers all 39 countries participating in COSME. The network is now present in 67 countries, including business cooperation centres in 28 non-EU countries.
- The Erasmus for young entrepreneurs mobility scheme has a broad geographical spread, implemented by a network of 194 local intermediary organisations in 37 countries (out of the 39 that participate). As of 2020, local intermediary organisations are expected to be in place for the first time in Kosovo and in Martinique.
- The European Cluster Collaboration Platform includes 1 112 industrial cluster organisations. They collaborate with approximately 120 000 SMEs, 8 000 large firms and 11 000 research organisations or technology centres. The platforms act as multipliers and bridge-builders to connect industrial ecosystem actors and serve as policy accelerators for the EU's industrial strategy. For instance, there are 400 digital clusters and 250 green-tech clusters registered on the platform that are ready to team up and help implement the European Green Deal.

Performance assessment

- The reinforcement of the COSME Loan Guarantee Facility resources from the SME window of the European Fund for Strategic Investments, which doubled the available resources, meant that it was already possible to achieve the targets set for the overall programming period (2014-2020) in 2018. In 2019 the Loan Guarantee Facility, as enhanced by the SME window of the European Fund for Strategic Investments, continues making financial support available to small and medium-sized enterprises with more than 88% of SMEs having less than 10 employees and almost 50% being start-ups with an operational history of less than 5 years. As of 31 December 2019 more than 553 000 SMEs in 32 countries had received financing of almost EUR 32 billion (indicators 2 and 3), confirming the attractiveness of the programme.
- The outreach of the Enterprise Europe Network is in line with its target (indicator 4). Earlier findings on the impact evaluation of the network concluded that the average net effect for participating SMEs was an increase of approximately 3 percentage points in annual turnover (compared to SMEs not receiving Enterprise Europe Network services).
- To enhance the coherence of the financial instruments available under the EU budget, the successor facilities to the COSME Loan Guarantee Facility and the Equity Facility for Growth will be established under the SME window of the new InvestEU programme.

Concrete examples of achievements

250 000 SMEs	16 500 entrepreneurs	500 000 SMEs	200 stakeholders	1 039 organisations
received support from the Enterprise Europe Network in 2019.	were involved in the Erasmus for young entrepreneurs mobility scheme.	received support from the COSME Loan Guarantee Facility.	discussed the potential of digitalisation for the EU's tourism industry in the European Tourism Forum of Helsinki (October 2019).	were included in the European Cluster Collaboration Platform, which reaches out to around 120 000 SMEs, 8 000 large firms and 11 000 research organisations or technology centres.

- The Enterprise Europe Network's services range from information on EU matters, company visits and awareness-raising campaigns to specialist advisory services, company missions, and matchmaking and technology brokerage events. Some 3 000 network staff have been active at local events, providing advisory services to 70 000 SMEs on access to finance, intellectual property rights, business and technology, resource-efficiency services, individual partnering support, etc., and around 80 000 meetings between SMEs were organised at matchmaking events. The network's scale-up advisors are now active in all consortia, helping scale-ups develop their business outside their home country. The most requested services are business partnering, access to finance and investor relationship building.
- COSME funded capacity building amongst SMEs in the tourism sector (e.g. by increasing their ability to adapt to more sustainable business models, or to come up with more sustainable products). Exchanges of best practice also encouraged the EU's tourism industry to adapt to challenges and emerging global trends.

⁽⁹⁰⁾ This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

In particular, six cross-border and cross-sectoral cooperation and capacity-building schemes will now work with SMEs on innovative solutions for sustainable tourism and foster the capacities and skills of companies (more than 300 SMEs) to improve their sustainable management practices and increase standards.

- By the end of 2019 approximately 8 300 exchanges had taken place under the Erasmus for young entrepreneurs mobility scheme. New entrepreneurs who participated in the programme between 2014 and 2016 have created 251 new companies so far, and over 1 000 new jobs. Host entrepreneurs also confirmed the positive effects: along with over 1 100 new jobs having been created on their side, 58% of experienced entrepreneurs have seen an increase in turnover and 41% have seen an increase in employment.

LEGAL BASIS

Regulation (EU) No 1288/2013 of the European Parliament and of the Council as amended by Regulation (EU) 2018/1475 and repealing Decisions No 1719/2006/EC, No 1720/2006/EC and No 1298/2008/EC

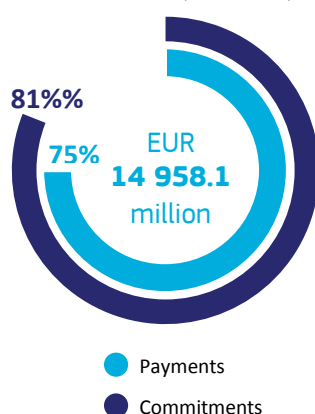
MORE INFORMATION

<http://europa.eu/!tU79tW>

FINANCIAL PROGRAMMING

(million EUR)

2014	1 558.8
2015	1 608.1
2016	1 734.7
2017	2 070.2
2018	2 314.5
2019	2 786.4
2020	2 885.4
Total	14 958.1

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

In 2019, the results of two new Erasmus+ impact studies were made available.

<https://europa.eu/!RH98bU>

<https://europa.eu/!RD46kH>

How is it implemented?

The Directorate-General for Education and Culture is the lead DG for the implementation of the programme. It is implemented through a combination of direct and indirect management (through grants and procurements) and financial instruments.

ERASMUS+

THE EU PROGRAMME FOR EDUCATION, TRAINING, YOUTH AND SPORT

What is Erasmus+?

Erasmus+ is the EU's flagship programme to support and strengthen education, training, youth and sport. For the past three decades, Erasmus+ and its predecessors have offered opportunities for young people, learners and staff of all ages to study, train, gain experience and volunteer abroad, in Europe or beyond, and has fostered the sharing of knowledge and experience between institutions, organisations and policymakers in different countries. At the same time the programme fosters European identity and reinforces European values.

**Specific objectives****Supporting education and training**

- The programme contributes to the achievement of the objectives of the Europe 2020 strategy, notably the headline education target; the objectives of the strategic framework for European cooperation in education and training for sustainable development of higher education in partner countries; the objectives of the renewed framework for European cooperation in the youth field (2010-2018) for building best practices in education policy, gathering and disseminating knowledge and promoting educational policy reforms at national and regional levels; the objective of developing the European dimension in sport; and the promotion of European values in accordance with Article 2 of the Treaty on European Union.

Why is it necessary?

The Erasmus+ programme develops a European dimension to education. Erasmus+ offers young people, learners and staff of all ages opportunities to study, train, gain experience and volunteer abroad, in Europe or beyond. It has stimulated student and teacher mobility, cooperation between institutions and organisations, supported the harmonisation of university degree structures and helped make higher education systems more compatible.

Erasmus+ also promotes activities outside formal education – building the capacity of youth workers and enabling young people to develop their skills, intercultural awareness and active citizenship. It has also worked to make qualifications and skills for learners and workers more transparent.

Erasmus+ guarantees that schools, educational institutions at all levels, youth organisations and young people in all participating countries can benefit from mobility and the exchange of good practices. The EU is helping to build bridges between people and bring about a border-free Europe.









Outlook for the 2021-2027 period

The Commission's proposal for the new Erasmus programme for 2021-2027 aims to make the programme more inclusive and accessible to people from all social backgrounds; more innovative; more international and more supportive of a European identity.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
2 070.2		2017	1 913.9
2 314.5		2018	2 241.9
2 786.4		2019	2 602.0

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Higher education – learners (in thousands) ⁽¹⁾		 80%	2 080	1 662 out of 2 080 thousand higher education learners
Vocational education and training – learners (in thousands)		 > 100%	674	709 compared to 674 thousand vocational education and training learners
Higher education, vocational education and training, schools and adult staff supported (in thousands) ⁽¹⁾		 > 100%	650	654 compared to 650 thousand staff supported
Participants declaring an increase in competencies		 > 100%	88%	93% compared to 88% target
Participants who have received a certificate or diploma		 > 100%	88%	90% compared to 88% target
Youth staff supported (in thousands) ⁽¹⁾		 > 100%	162	198 compared to 162 thousand staff supported
Long-term mobility – increased language skills ⁽¹⁾		 97%	98%	95% compared to 98% participants
Partner country higher education institutions involved in mobility and cooperation actions ⁽¹⁾		 84%	1 300	1 096 out of 1 300 institutions

 % of target achieved by the end of 2019

⁽¹⁾ Cumulative results for 2014-2019 compared to cumulative targets for 2014-2020.

Where are we in the implementation?

- In the field of higher education, the European universities initiative started in 2019, when the first 17 universities were selected. They include institutions from across the EU, ranging from the fields of applied sciences, technical studies and fine arts to comprehensive and research-intensive universities. The programme financed a record 163 new capacity-building projects in higher education. A total of 51 new Erasmus Mundus joint master's degrees and around 55 000 new short-term, academic credit mobilities were selected in 2019.
- In the area of adult education, in 2019 the Erasmus+ programme supported policy priorities such as the supply of high-quality learning opportunities and the development of the competences of educators, with a budgetary increase for both mobility and strategic partnership actions.
- Concerning vocational education and training, the programme supported more than 153 000 learner mobilities. Particular emphasis was placed on ErasmusPro, which supports the long-term mobility of vocational education and training learners and recent graduates. A new action was introduced to support the creation of transnational and national networks and partnerships of providers.
- The e-twinning community among schools has continued to grow, with some 125 000 new members registered in 2019. This represents a significant increase of more than 21 % in comparison to 2018. Overall, 764 000 registrations have been recorded since the programme started and a new record has been achieved for connecting teachers and classrooms across Europe, to step up support to teachers and foster exchanges.
- Regarding the EU's cooperation with other regions of the world, during its first 2 years of implementation, Erasmus+ virtual exchanges enabled young people living in Europe and the southern Mediterranean area to take part in moderated online debates that can form part of a higher education degree or a youth project. More than 17 000 higher education students and other stakeholders have taken part in a virtual exchange.
- In 2019, priority in the area of sport was given to grassroots activities and to increasing participation in sport to promote awareness of the importance of health-enhancing physical activity, in line with the Tartu call for a healthy lifestyle. The 2019 edition of the European Week of Sport saw a new record of over 14.6 million citizens participating in more than 23 000 events in 42 countries and regions. The third edition of the #Beinclusive EU spots awards recognised organisations using the power of sport to increase social inclusion for disadvantaged groups.

Performance assessment

- The programme has demonstrated an outstanding track record not only in terms of numbers – delivering results that are consistently in line with or above expectations across different areas and actions – but also in terms of social impact. Over the last three decades, 10 million people have participated in what for many of them turned out to be life-changing experiences under Erasmus+ and its predecessors.
- After a learning exchange abroad, young people, adults, youth workers and teachers say they feel better prepared to take on new challenges, have better career prospects and are more aware of the benefits the EU brings to their daily lives. In 2019, 93% of the participants stated that they had increased their key competences.
- The Erasmus+ programme has built on the experience of previous programmes and has successfully adapted to new priorities. For example in 2019, it was an important instrument for inclusion: in the area of sport, the programme promoted and supported voluntary activities, together with social inclusion, including refugees and migrants; the role models initiative created a pool of positive role models to promote social inclusion, prevent exclusion and radicalisation and encourage active citizenship and commitment to European values; and two pilot projects in the area of social inclusion of refugees and the monitoring and coaching, through sports, of youngsters at risk of radicalisation are being implemented.

Concrete examples of achievements

900 000	30	125 000	14.6 million	9 000	2
participants gained experience in one of the 34 programme countries in 2019. Among these participants there were close to 360 000 students, 153 000 learners in vocational education and training, 158 000 members of staff from educational institutions, 39 000 members from youth organisations, 113 000 young people and 55 000 mobilities to and from partner countries.	years of the Jean Monnet actions were marked in 2019. Currently more than 300 000 students benefit from the Jean Monnet Actions every year in more than 1 000 universities and almost 90 countries worldwide.	new members registered with the eTwinning community in 2019.	citizens participated in more than 23 000 events of the European Week of Sport, events in 42 countries and regions in Europe in 2019.	students from a variety of study area acquired forward-looking digital skills, under the Erasmus+ digital opportunity traineeships initiative	pilot projects focusing on social inclusion were implemented for social inclusion of refugees, and the monitoring and coaching of youngsters at risk of radicalisation.

LEGAL BASIS

Regulation (EU) No 1296/2013 of the European Parliament and of the Council

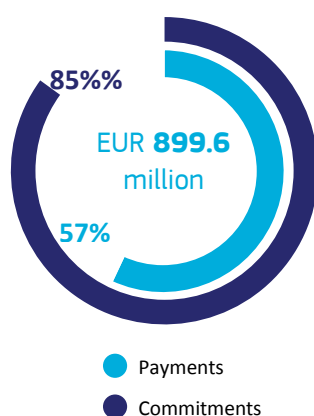
MORE INFORMATION

<http://europa.eu/!Qw97vT>

FINANCIAL PROGRAMMING

(million EUR)

2014	123.0
2015	128.6
2016	127.1
2017	136.0
2018	131.7
2019	136.1
2020	117.1
Total	899.6

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The midterm evaluation of EaSI was carried out in 2017. For further information please consult:
<http://europa.eu/!wy63PW> and
<http://europa.eu/!bx37TB>

How is it implemented?

The Directorate-General for Employment, Social Affairs and Inclusion is the lead DG for the implementation of the programme. The programme is implemented through direct (grants and procurement) and indirect management (European Fund for Strategic Investments equity instrument and delegation to financial intermediaries).

EaSI

EUROPEAN UNION PROGRAMME FOR EMPLOYMENT AND SOCIAL INNOVATION

What is EaSI?

The employment and social innovation (EaSI) programme is a financing instrument at EU level promoting a high level of quality and sustainable employment, guaranteeing adequate and decent social protection, combating social exclusion and poverty and improving working conditions. The three axes of EaSI support the modernisation of employment and social policies (PROGRESS axis), job mobility (EURES axis) and access to microfinance and social entrepreneurship (Microfinance / Social Entrepreneurship axis).

**Specific objectives**

- Support the development, implementation, monitoring and evaluation of the EU's instruments, policies (promoting a high level of quality and sustainable employment, guaranteeing adequate and decent social protection, combating social exclusion and poverty and improving working conditions) and relevant law, and promote evidence-based policymaking, social innovation and social progress, in partnership with the social partners, civil society organisations and public and private bodies (PROGRESS axis).
- Promote workers' voluntary geographical mobility on a fair basis and boost employment opportunities by developing high-quality and inclusive European Union labour markets that are open and accessible to all, while respecting workers' rights throughout the EU, including freedom of movement (EURES axis).
- Promote employment and social inclusion by increasing the availability and accessibility of microfinance for vulnerable people who wish to start up a micro-enterprise and for existing micro-enterprises, and by increasing access to finance for social enterprises (Microfinance / Social Entrepreneurship axis).

Why is it necessary?

The EaSI programme provides EU funds to coordinate the implementation of the employment and social objectives of the Europe 2020 strategy for smart, sustainable and inclusive growth. It focuses on key actions with high EU added value, such as:

- supporting EU policymaking;
- focusing on the transnational dimension of employment, social situation, working conditions, and health and safety at work;
- ensuring the development and proper application of EU laws in the fields of employment, working conditions, health and safety at work and social protection;
- promoting workers' geographical mobility within the EU by developing recruitment and placing services;
- increasing the availability and accessibility of microfinance, as additional funding is more likely to be attracted from third-party investors such as the European Investment Bank.

Outlook for the 2021-2027 period

The Commission proposed to include this programme within the new European Social Fund+ for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
135.2	2017	84.5	
129.3	2018	114.2	
134.5	2019	125.7	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Visits to the EURES platform ⁽¹⁾		<div><div style="width: 63%;">63%</div></div>	2.0 m	1.3 million out of 2.0 million
Youth job placements achieved or supported under the preparatory action 'Your first EURES job' and targeted mobility schemes		<div><div style="width: 91%;">91%</div></div>	15 000	13 661 out of 15 000
EURES advisers' contacts with jobseekers, job changers and employers ⁽¹⁾		<div><div style="width: >100%;">>100%</div></div>	1.4 m	1.4 million out of 1.4 million
Businesses created or consolidated – microfinance		<div><div style="width: >100%;">>100%</div></div>	41 000	69 770 compared to a target of 41 000
Businesses created or consolidated – social enterprises		<div><div style="width: >100%;">>100%</div></div>	1 100	2 020 compared to a target of 1 100
Proportion of beneficiaries that have created or further developed a business with EU microfinance that are unemployed or belonging to disadvantaged groups: Progress Microfinance		<div><div style="width: 28%;">28%</div></div>	50%	14% out of a target of 50%

■ % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014–2018.

Where are we in the implementation?

- EUR 412 million was committed in 2017–2019, involving over 1 000 beneficiaries from all participating countries and over 540 organisations. In addition, the programme assisted 38 EU sector organisations. Almost 33% of the grants awarded following calls for proposals targeted public authorities, some 25% supported the Social Partners (trade union organisations and employers' organisations), and 24% went to foundations/non-governmental organisations.
- The PROGRESS axis gathered evidence to shape policy developments, fostered shared understanding through policy debates and provided financial support to some key EU-level non-governmental organisations. Much of EaSI-funded evidence fed directly into the key EU policy processes such as the European Semester, including its annual growth survey, country-specific recommendations, employment guidelines and joint employment reports. The 17 calls for proposals that were launched led to 83 agreements for action grants. Two calls for proposals for operating grants to 24 organisations led to two yearly contracts for each of them. They addressed issues such as administrative cooperation and information on the posting of workers.
- The EURES axis supported the European job mobility portal, training courses and horizontal support for the member organisations of the EURES network. The five EURES calls for proposals concerning general and targeted mobility schemes launched between 2017 and 2019 resulted in 48 contracts. In 2019, 'Your first EURES job' (YfEj), dedicated to jobseekers under 35, filled 1 724 job vacancies and provided support to 1 923 jobseekers. The cross-border partnerships supporting worker mobility handled 23 000 job vacancies matching at least 2 800 job seekers with jobs.
- In 2017–2018, under the Microfinance / Social Entrepreneurship axis, contracts worth EUR 57.4 million were signed with microfinance intermediaries, resulting in 47 684 microloans worth EUR 129.3 million. By October 2019 financial intermediaries from 27 countries were participating in the microfinance window. Under the social entrepreneurship window, 949 social enterprises had received funding by the end of 2018. Financial intermediaries from eight new countries joined in 2019. In addition, a framework contract was launched for the provision of technical assistance through training sessions tailored to capacity building and training sessions on the European Code of Good Conduct for microcredit provision to social enterprises finance providers. Under the EaSI capacity-building investments window, 11 contracts for transactions amounting to a total of EUR 23.2 million were signed in eight countries. As a result, the financial envelope available in 2019 increased to EUR 26 million. The EaSI-funded instrument was launched in 2019. The European Commission signed a first commitment to the fund of EUR 48 million as an equity investor.

Performance assessment

- **PROGRESS.** The generated evidence contributed to the European semester and policy initiatives in the field of employment and social affairs, for example the new skills agenda for Europe. EaSI's stakeholders provided positive feedback on its deliverables. Furthermore, EaSI's financial assistance to EU and national organisations increased their policymaking capacity compared to the previous monitoring period.
- **EURES.** Its overall performance is positive, with increases in the number of youth job placements and direct contact with jobseekers. Regarding the former, since 2016 there has been a steady increase due to: (1) the large size and long duration of the 'Your first EURES job' projects; and (2) the experience and increased delivery capacity of the implementing organisations. Concerning the latter, the capacity increased thanks to the introduction of compulsory reporting on the part of EURES advisers by the new EURES regulation. Concerning the EURES Job Mobility Portal, there was a decrease in the number of unique visits in 2019, despite communication actions. This is due to the improved conditions in the EU labour market and the decrease in unemployment. That said, the number of registered users increased and the overall number of visitors is high, at around 1 million per month.
- **Microfinance / social entrepreneurship.** The number of final-recipient countries had increased significantly by the end of September 2019. The targets set have largely been reached in absolute numbers. However, the improvements in the labour market and the fall in unemployment have led to a lower-than-expected number of beneficiaries being unemployed or in a vulnerable situation. Therefore, the relevant indicator on the proportion of the said beneficiaries creating a business with EU microfinance saw a downward trend between 2016 and 2018.

Concrete examples of achievements

1 000	540	5	1 923	2 800	EUR 200 million
beneficiaries were reached by EaSI projects between 2017 and 2019.	organisations were supported by EaSI between 2017 and 2019.	new projects on fair working conditions for posted workers began in 2019.	young jobseekers under the age of 35 received financial assistance under four 'Your first EURES job' projects in 2019.	jobseekers were successfully matched with jobs through the EURES cross-border partnerships in the first half of 2019.	was provided as the budget of the loan fund launched in 2019 by the EU, the European Investment Bank and the European Investment Fund to support lending under EaSI.

LEGAL BASIS

Regulation (EU) No 2018/1475 of the European Parliament and of the Council, amending Regulation (EU) No 1288/2013, Regulation (EU) No 1293/2013 and Decision No 1313/2013/EU

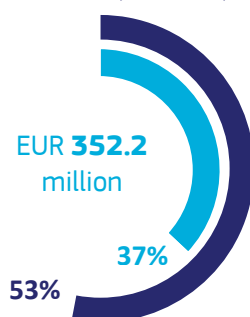
MORE INFORMATION

<http://europa.eu/!GQ68Dy>

FINANCIAL PROGRAMMING

(million EUR)

2018	42.8
2019	143.3
2020	166.1
Total	352.2

**OVERALL EXECUTION
(2014-2019)**

- Payments
- Commitments

**Evaluations/
studies conducted**

N/A

How is it implemented?

The Directorate-General for Education, Youth, Sports and Culture is the lead DG for the implementation of the programme. European Solidarity Corps funding is provided in the form of grants, procurement and prizes.

EUROPEAN SOLIDARITY CORPS

What is the European Solidarity Corps?

The European Solidarity Corps regulation that entered into force on 4 October 2018 establishes the Corps as a fully fledged programme for the period 2018-2020. The aim of the corps is to give young people the chance to take part in a range of solidarity activities that address challenging situations across the EU, such as rebuilding communities following natural disasters and addressing social challenges such as social exclusion, poverty and health and demographic challenges. Taking part in solidarity activities not only helps young people's personal development, active involvement in society and employability, but also assists non-governmental organisations, public bodies and companies in their efforts to cope with societal and other challenges. The corps supports volunteering, traineeships and job placements in a wide range of sectors engaged in solidarity and will provide young people with opportunities to set up their own solidarity projects or volunteer as a group.

**Specific objectives**

- To provide young people, with the support of organisations, with easily accessible opportunities to engage in solidarity activities while improving their skills and competences for personal, educational, social, civic and professional development, as well as enhancing their employability and helping them move into regular employment.
- To contribute to European cooperation relevant to young people and to raise awareness of its positive impact.
- To ensure that particular efforts are made to promote social inclusion and equal opportunities, and in particular to enable the participation of young people with fewer opportunities, through a range of special measures such as appropriate forms of solidarity activities and personalised support.
- To ensure that the solidarity activities that are offered to the European Solidarity Corps participants contribute to addressing concrete societal challenges and strengthening communities, are of a high quality and are properly validated.

Why is it necessary?

The European Solidarity Corps will enhance the European dimension of solidarity, complementing existing public and private policies, programmes and activities without creating competition or substitution effects. The corps will address unmet societal needs that cannot be addressed by the labour market, existing volunteering activities or other types of solidarity programmes.

The EU added value of the programme derives from the cross-border character of the activities, in addition to those developed at national or regional levels.

While actions to tackle socioeconomic problem areas are primarily the responsibility of the Member States and regions and have to be taken closest to the citizen at

national and sub-national levels, the EU has a role to play in identifying shared challenges, stimulating cooperation and transnational mobility, encouraging synergies and promoting the sharing of good practices and mutual learning, and supporting a Europe-wide approach to social innovation, where there is clear added value for European solutions.

Outlook for the 2021-2027 period


For the next long-term EU budget for 2021-2027, the Commission has proposed a new programme for the European Solidarity Corps, consolidating efforts to have one single entry point for young people ready to engage in solidarity.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
42.5	2018	26.0	
143.3	2019	105.1	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Participants in volunteering		<div><div></div></div> 20%	28 900	12 421 out of 28 900 participants
Participants in traineeships and jobs		<div><div></div></div> 4%	11 200	416 out of 11 200 participants
Participants in solidarity projects		<div><div></div></div> 21%	18 900	4 003 out of 18 900 participants

 % of target achieved by the end of 2019

Where are we in the implementation?

- The 2019 call for proposals provided opportunities for organisations and groups of young people to apply to national agencies for funding for volunteering projects, traineeships and jobs or solidarity projects.
- The programme is progressively reaching its 'cruising speed', after the late adoption of the regulation. Projects have been starting since 2018 as well as preparations for the implementation of the future reinforced European Solidarity Corps.
- In 2019, preparatory work was also carried out for the establishment of the European Voluntary Humanitarian Aid Corps, a new strand that will open up new opportunities for young people to participate in solidarity activities in the area of humanitarian aid.
- In March 2019, the European Youth Week was a major focus for the promotion of the programme and the opportunities that it offers; the Commission presented the EU's youth policy priorities – such as solidarity, inclusion and participation – involving a wide range of young people and youth stakeholders.
- In March 2019, the European Solidarity Network was successfully launched. The network supports the development and expansion of tools to help create a network of communities around the European Solidarity Corps.
- In 2019, the programme supported larger scale volunteering projects in the following priority areas: European cultural heritage; social inclusion of people with fewer opportunities and response to environmental challenges and climate challenges.
- In order to increase the benefits to young people, the Commission widened the training that is offered prior to and during placements and improved the measures for better recognition of learning outcomes. The first modules of the general online training scheme available for young people registering with the European Solidarity Corps will be made available in spring 2020.
- In 2019, the corps continued to support the EU's cooperation with the European neighbourhood region (western Balkans, Eastern Partnership and southern Mediterranean) through volunteering activities. Specific agreements were also signed with Iceland, North Macedonia and Turkey, enabling their full participation in the programme.

Performance assessment

- The European Solidarity Corps has existed as an independent funding programme since October 2018. The call in 2018 was an important achievement and after 1 year of implementation the number of opportunities made available has been steadily increasing, as has the number of participants in solidarity projects.
- The corps was particularly successful in helping to support the EU's political priorities: with more than 30% of participants being young people with fewer opportunities, the programme contributes to social inclusion and 13% of the projects being supported already contribute to addressing climate action, the environment and the protection of nature.
- The programme is also evolving: training is something completely new under the European Solidarity Corps; even if it is still being phased in, specific efforts are dedicated to promotion, ensuring understanding of the opportunities, reaching out to the relevant stakeholders and training potential applicants.
- The level of demand for quality labels for the occupational strand is satisfactory and indicates a positive future trend.

Concrete examples of achievements

21 000	120 000	191 000	34 500	30%	13%
young people have been offered opportunities to engage in solidarity activities.	participants attended over 1 000 events in 35 different countries as part of the European Youth Week in March 2019.	young people have registered with the Corp's portal since 2016.	young people have been involved in the European Solidarity Network or have started activities since 2016.	of the projects supported by the programme involved people with fewer opportunities.	of the projects supported by the programme contributed to climate action, and to environment and nature protection.

LEGAL BASIS

Regulation (EU) No 1294/2013 of the European Parliament and of the Council

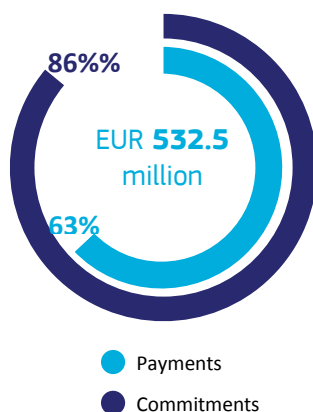
MORE INFORMATION

<http://europa.eu/!NQ39kG>

FINANCIAL PROGRAMMING

(million EUR)

2014	66.4
2015	68.9
2016	71.8
2017	89.3
2018	82.4
2019	78.4
2020	75.3
Total	532.5

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The studies and evaluations financed under the Customs 2020 programme can be consulted on the 'Taxation and customs union' section of the Europa website: <http://europa.eu/!tv44YW>

How is it implemented?

The Directorate-General for Taxation and Customs Union is the lead DG for the implementation of the programme through direct management.

CUSTOMS 2020

ACTION PROGRAMME FOR CUSTOMS IN THE EUROPEAN UNION

What is Customs 2020?

Customs 2020 aims to improve the functioning and modernisation of the customs union. It supports customs authorities in protecting the financial and economic interests of the EU and of the Member States, including the fight against fraud and the protection of intellectual property rights, to increase safety and security, to protect citizens and the environment, to improve the administrative capacity of the customs authorities and to strengthen the competitiveness of EU businesses. The majority of programme funding (approximately 80%) enables the development and operation of European information systems, followed by the organisation of joint actions, cooperation and collaboration (around 15%) and training activities (around 5%).

Strengthening the security and protection of citizens – while facilitating legitimate international trade, pursuing customs modernisation and developing and managing an effective and efficient customs union – has been part of the EU's priorities. The programme pursues these priorities mainly through the setting-up of a paperless customs environment. This environment facilitates trade and improves the effective enforcement of rules for protecting the financial, safety and security interests of the EU.

Regarding operational cooperation, the programme funds expert teams to structure forms of cooperation, pooling expertise to perform tasks in specific domains or carry out operational activities, possibly with the support of online collaboration services, administrative assistance and infrastructure and equipment facilities.

**Specific objectives**

- To support customs authorities in protecting the financial and economic interests of the EU and of the Member States, including the fight against fraud and the protection of intellectual property rights, to increase safety and security, to protect citizens and the environment, to improve the administrative capacity of customs authorities and to strengthen the competitiveness of EU businesses.

Why is it necessary?

The customs union is an exclusive competence of the EU. The implementation of EU legislation is, however, a national competence. The EU's legal framework in itself does not sufficiently ensure the proper functioning of the customs union. It should be complemented by supporting measures, as provided for by the Customs 2020 programme, in order to ensure that EU customs legislation is applied in a convergent and harmonised way at national level.

Many of the activities in the customs area are of a cross-border nature, involving and affecting all Member States, and therefore they cannot be delivered effectively and efficiently by individual Member States. The Customs 2020 programme offers Member States an EU framework in which to develop activities through cooperation amongst national customs officials on the one hand, and cooperation on information technology on the other hand. This set-up is more cost-effective than if each Member State were to set up its own individual

cooperation framework on a bilateral or multilateral basis. From an economic point of view, action at EU level is much more efficient. The backbone of customs cooperation is a highly secure, dedicated communications network. It connects national customs administrations through approximately 5 000 connection points. This common IT network ensures that each national administration only needs to connect to this common infrastructure once to be able to exchange any kind of information. If no such infrastructure were available, each Member State would have to link individually to the national systems of each of the other Member States.



Outlook for the 2021-2027 period


The Commission proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
89.3	2017	64.8	
82.4	2018	71.9	
78.4	2019	79.6	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Feedback from participants – Network opportunity ⁽¹⁾		 >100%	90%	96% compared to 90% positive feedback
Feedback from participants – Lasting network effect ⁽¹⁾		 91%	80%	73% compared to 80% positive feedback
Feedback from participants – Number of face-to-face meetings ⁽¹⁾		 >100%	380	476 compared to 380 meetings
Availability of the European information systems common communication network ⁽¹⁾		 >100%	99.90%	99.95% compared to 99.90% availability
European information systems availability – business hours ⁽¹⁾		 >100%	97.00%	98.68% compared to 97.00% availability
European information systems availability – other ⁽¹⁾		 >100%	95.00%	98.68% compared to 95.00% availability

 % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014-2019.

Where are we in the implementation?

- The core outcomes of the Customs programme are the European information systems, which need to be deployed in accordance with the legal deadlines set out in the Union Customs Code. Some of these deadlines were amended in 2019 to allow for the scope of some projects to be modified and for a shift from the Member State level to the EU level. Against this background, in 2018 and 2019, EUR 7.1 million in total was frontloaded for the Customs 2020 programme, in particular to deliver the specifications and software for the major trans-European information technology systems of the Union Customs Code. Moreover, EUR 3.9 million in additional funding was made available in 2019 for Brexit preparedness.
- The funding available for the information technology systems (which are shared with the Fiscalis programme) is mainly used for the maintenance and further development of the systems, so as to keep their availability at a high level. The availability rate in 2019 (99%) reflected the deployment of new releases and new applications on the platform, mostly in the customs area.

Performance assessment

- The data collected in the performance measurement of the programme, together with the results of the midterm review, show that the Customs 2020 programme plays an important role in facilitating the implementation and development of the EU's customs policy, and that it is on course to fulfil its objectives of protecting the financial and economic interests of the EU and of the Member States, improving the administrative capacity of the customs authorities and strengthening the competitiveness of EU businesses.
 - The programme has been effective in providing solutions for problems with a clear EU dimension through the use of common information technology systems, joint actions and networking between Member States. This has led to added EU value, efficiency gains and cost savings, in particular through the interoperability and interconnectivity provided by the central information technology systems.
 - On average, over the 2014-2019 period, the availability rate of the systems surpassed the target level. This is with the exception of 2019, when the availability rate was below target due to planned new releases and applications.
 - The Commission has tried to increase the lasting network effect, which has remained below target since the launch of the programme, for instance by introducing improvements in the area of communication and to facilitate online collaboration and sharing between participants in programme activities after the events come to an end. In addition, there may be an unclear understanding of the different possibilities for remaining in contact beyond physical meetings and phone calls.
 - The Customs 2020 programme remains central to the functioning of the customs union and the further integration of the national customs authorities, including through its networking functions and the strengthening of the administrative capacity of the national authorities.

Concrete examples of achievements

54	6.9 billion	32 TB	4	30	2 000
European information systems were in operation in 2019.	messages were exchanged in 2019 on the Common Communication Network / Common Systems Interface (CCN/CSI, shared with Fiscalis).	of data was exchanged in 2019 (+ 11% compared to 2018).	expert teams were operational in the customs area in 2019.	e-learning courses in the customs area were available at the end of 2019.	guidelines and recommendations have been issued, including on the withdrawal of the United Kingdom.

LEGAL BASIS

Regulation (EU) No 1286/2013 of the European Parliament and of the Council

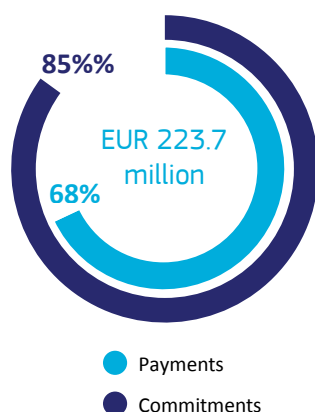
MORE INFORMATION

<http://europa.eu/tp64hw>

FINANCIAL PROGRAMMING

(million EUR)

2014	30.9
2015	31.1
2016	31.5
2017	31.9
2018	32.5
2019	32.7
2020	33.1
Total	223.7

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The studies and evaluations financed under the Fiscalis programme can be consulted on the 'Taxation and customs union' section of the Europa website: <http://europa.eu/ltv44YW>

How is it implemented?

The Directorate-General for Taxation and Customs Union is the lead DG for the implementation of the programme through direct management.

FISCALIS 2020

ACTION PROGRAMME FOR TAXATION IN THE EUROPEAN UNION

What is Fiscalis 2020?

Fiscalis 2020 is an EU cooperation programme enabling national tax administrations to create and exchange information and expertise. It allows major trans-European information technology systems to be developed and operated in partnership, and allows various person-to-person networks to be established by bringing together national officials from across the EU. The majority of the programme funding (approximately 80%) enables the development and operation of the European information systems for taxation, followed by the organisation of joint actions, cooperation and collaboration (around 15%) and training activities (around 5%).

It improves the proper functioning of the taxation systems in the internal market by enhancing cooperation between participating countries, their tax authorities and their officials. This includes the fight against tax fraud, tax evasion and aggressive tax planning and the implementation of EU law in the field of taxation by ensuring the exchange of information, supporting administrative cooperation and, where necessary and appropriate, enhancing the administrative capacity of participating countries with a view to assisting in reducing the administrative burden on tax authorities and the compliance costs for taxpayers.

The Fiscalis 2020 programme supports a highly secure, dedicated communication network allowing the exchange of information in the framework of the fight against fraud, for both direct and indirect taxation.

**Specific objectives**

- To support the fight against tax fraud, tax evasion and aggressive tax planning and the implementation of EU law in the field of taxation by ensuring the exchange of information, by supporting administrative cooperation and, where necessary and appropriate, by enhancing the administrative capacity of participating countries with a view to assisting in reducing the administrative burden on tax authorities and the compliance costs for taxpayers.

Why is it necessary?

Without intense cooperation and coordination between Member States, unfair tax competition and tax shopping would increase, while fraudsters would exploit the lack of cooperation between national authorities. The added value of the Fiscalis programme, including for the protection of the financial interests of the EU Member States and of taxpayers, has been recognised by the tax administrations of the participating countries. The challenges identified for the next decade cannot be tackled if Member States do not look beyond the borders of their administrative territories or cooperate intensively with their counterparts. The Fiscalis programme, implemented by the Commission in cooperation with the participating countries, offers Member States an EU framework in which to develop activities through cooperation among national tax officials on the one hand, and cooperation on information technology on the other hand. This set-up is more cost-effective than if each Member State were to set up individual cooperation frameworks on a bilateral or multilateral basis.

The programme connects national tax administrations through approximately 5 000 (customs and taxation) connection points. This common information technology network ensures that each national administration only needs to connect to this common infrastructure once to be able to exchange any kind of information. If no such infrastructure were available, each Member State would have to link individually to the national systems of each of the other Member States.

Outlook for the 2021-2027 period

The Commission proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in EUR million)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
31.9	2017	30.9	
32.5	2018	30.6	
32.7	2019	30.8	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
The common communication network for the European information systems ⁽¹⁾		<div><div>> 100%</div></div>	99.90%	99.95% compared to 99.90% availability
Network opportunity ⁽¹⁾		<div><div>> 100%</div></div>	90%	96% compared to 90% availability
Lasting networking effect ⁽²⁾		<div><div>91%</div></div>	78%	71% compared to 78% availability
Face-to-face meetings ⁽²⁾		<div><div>> 100%</div></div>	441	529 compared to 441 face-to-face meetings

■ % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014-2019 compared to target.

⁽²⁾ Average of results for 2014-2019 compared to average of milestones 2014-2020.

Where are we in the implementation?

- The core outcomes of the Fiscalis programme are the European information systems, which allow for the electronic exchange of tax-related information between the Member States. The funding available for the information technology systems (which are shared with the Customs 2020 programme) is mainly used for the maintenance and further development of the systems, so as to keep their availability at a high level. The availability rate in 2019 (99%) reflected the deployment of new releases and new applications on the platform, mostly in the customs area.

Performance assessment

The data collected in the performance measurement of the programme, together with the results of the midterm review, show that the Fiscalis 2020 programme is on course to fulfil its objective of supporting the fight against tax evasion, tax fraud and aggressive tax planning.

- The programme has been effective in providing solutions for problems with a clear EU dimension through the use of common information technology systems, joint actions and networking between Member States. This has led to added EU value, economies of scale and improved coordination, in particular through the interoperability and interconnectivity provided by the central information technology systems.
- On average, over the 2014-2019 period, the availability rate of the systems surpassed the target level. This is with the exception of 2019, when the availability rate was below target due to planned new releases and applications.
- The Commission has tried to increase the lasting network effect, which has remained below target since the launch of the programme, for instance by introducing improvements in the area of communication and to facilitate online collaboration and sharing between participants in programme activities after the events come to an end. In addition, there may be an unclear understanding of the different possibilities for remaining in contact beyond physical meetings and phone calls.
- The Fiscalis 2020 programme provides valuable support to national tax administrations and economic operators, including through its networking functions and the reduction of administrative burdens

Concrete examples of achievements

27	6.9 billion	32 TB	4	12	EUR 3.3 billion	EUR 4.5 billion
European information systems were in operation in 2019.	messages were exchanged in 2019 on the Common Communication Network / Common Systems Interface (CCN/CSI, shared with Customs).	of data was exchanged in 2019 (+ 11% compared to 2018).	expert teams were operational in the taxation area in 2019.	e-learning courses in the area of value added tax were available at the end of 2019.	in tax was identified through multilateral controls under Fiscalis 2013.	in value added tax was collected in 2018 under the mini one-stop-shop system, reducing cross-border administrative burden (+ 20% compared to 2017).

LEGAL BASIS

Regulation (EU) No 250/2014 of the European Parliament and of the Council and repealing Decision No 804/2004/EC

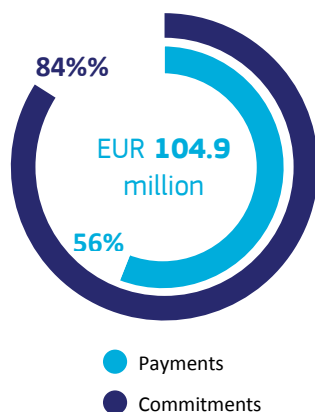
MORE INFORMATION

<http://europa.eu/!ry89dk>

FINANCIAL PROGRAMMING

(million EUR)

2014	13.7
2015	14.1
2016	14.5
2017	15.0
2018	15.3
2019	15.9
2020	16.4
Total	104.9

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The mid-term evaluation of the Hercule III programme was carried out in 2017. For further information please consult: <http://europa.eu/!Jq37nB>

How is it implemented?

The European Anti-Fraud Office is the lead service for the implementation of the programme. The programme is implemented through direct management.

HERCULE III

PROGRAMME TO PROMOTE ACTIVITIES IN THE FIELD OF THE PROTECTION OF THE FINANCIAL INTERESTS OF THE EUROPEAN UNION

What is Hercule III?

Hercule III is the latest EU anti-fraud programme, following Hercule II (2007-2013). It helps Member States fight fraud, corruption and other illegal activities. It helps finance practical projects, such as the purchase by national authorities of sniffer dogs, X-ray scanners and other technical equipment, to stamp out smuggling and other criminal activities that are against the EU's financial interests.

The programme protects the EU's financial interests by supporting action to combat irregularities, fraud and corruption affecting the EU budget. This includes combating tobacco smuggling, which remains a major concern, accounting for estimated annual losses of at least EUR 10 billion to national and EU budgets. Helping to fund technical equipment in harbours and airports aims to boost national authorities' capacity to fight smuggling. Hercule III also finances training activities. It helps national authorities share best practices through seminars and conferences on issues such as preventing corruption in procurement procedures. Another facet is training to boost and update the digital forensic skills of law enforcement staff.

The programme contributes to:

- the development of activities at EU and Member State level to counter fraud, corruption and any other illegal activities affecting the financial interests of the EU, including the fight against cigarette smuggling and counterfeiting;
- increased transnational cooperation and coordination at EU level between Member State authorities, the Commission and the European Anti-Fraud Office, and in particular increased effectiveness and efficiency of cross-border operations;
- effective prevention of fraud, corruption and any other illegal activities affecting the financial interests of the EU, by offering joint specialised training for staff of national and regional administrations, and for other stakeholders.

**Specific objectives**

- To prevent and combat fraud, corruption and any other illegal activities affecting the EU's financial interests.

Why is it necessary?

From an EU perspective, the programme significantly contributes to the development of activities at EU level to counter fraud, corruption and any other illegal activities; to the creation of increased transnational cooperation and coordination between Member State authorities, the Commission and the European Anti-Fraud Office; and to the establishment of an effective system to prevent fraud, corruption and any other illegal activities affecting the financial interests of the EU.

The programme creates in particular savings deriving from the collective procurement of specialised equipment and databases to be used by stakeholders and those derived from the specialised training.



Outlook for the 2021-2027 period

The Commission has proposed a continuation of the programme for the next multiannual financial framework in the new anti-fraud programme, which will also include the financing of the Anti-Fraud Information System (AFIS) and the Irregularity Management System (IMS).

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
15.0	2017	12.4	
14.8	2018	8.0	
15.9	2019	13.9	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Percentage of users that considered the use of Hercule-funded equipment added value to their activities		 >100%	75%	96% compared to 75% of beneficiaries
Satisfaction rate for training activities funded, including specialised training events ⁽¹⁾	60%	 >100%	75%	90% compared to 75% of satisfaction rate

 % of target achieved by the end of 2019

⁽¹⁾ Cumulative results for 2014-2019 compared to cumulative milestones for 2014-2020.

Where are we in the implementation?

- Between 2017 and 2019, the Commission awarded more than 100 grants to national and regional authorities, research institutes and NGOs for the purchase of technical equipment or the organisation of training events, conferences and seminars. It also concluded contracts for the purchase of goods and services such as access to commercial databases, the development of information technology tools and the organisation of training courses and conferences.
- The 2019 work programme was implemented according to plan, without any significant delays or problems. Grants were awarded for the purchase of investigation equipment (including forensic tools) and detection equipment (such as X-ray scanners), and to finance conferences, training events and studies targeting the improved protection of the EU's financial interests. The programme provided funds for access – through procurement – to commercial databases and the development of specific information technology tools for data analysis, to support law enforcement authorities in the Member States.

Performance assessment

- The programme has constantly achieved its objective of preventing and combating fraud through the organisation of specialised training events and the co-financed purchase of technical equipment.
- The first indicator shows an overall satisfaction rate of 96%, as expressed by users of the equipment in their final technical reports. The rate is significantly higher than the 75% target.
- In 2019, the programme financed 63 events (39 conferences, 12 specialised training courses and 12 staff exchanges). These activities were very well received by the participants – the first indicator shows that more than 1 000 participants, who replied to a survey, expressed a satisfaction rate of over 96%, confirming the added value of the programme.

Concrete examples of achievements

100 grants	63 events
were awarded to national and regional authorities, research institutes and NGOs for the purchase of technical equipment and tools, as well as for training, conferences and research studies in 2017-2019.	comprising 39 conferences, 12 specialised training courses and 12 staff exchanges were organised in 2019.

- During 2017-2019, the programme provided Member States with access to commercial databases containing worldwide trade statistics, company information and vessel movements. The databases were used extensively by customs authorities to support both investigations and risk analysis activities, identifying potentially suspicious trade.
- A grant from the programme for the purchase of specialised equipment helped the Spanish Guardia Civil to improve the skills and technical capacity of its investigators, while enhancing the quality and results of investigations. The saving to the EU budget in 2017 has been estimated at EUR 103 million, and more than 200 people were investigated or arrested.
- The Latvian Ministry of Finance implemented a project aimed at strengthening the capacity of anti-fraud coordination service network members to develop strategic tools for the fight against fraud and corruption affecting the EU's financial interests. The event gathered more than 200 participants from five Member States as well as representatives of the relevant European institutions and led to sharing of best practices, improved cooperation and strengthening of the network.
- Romania's Anti-corruption General Directorate organised a series of law-enforcement staff exchanges and workshops involving around 100 officials from Romania and three neighbouring countries (Bulgaria, Hungary and Ukraine). The project led to the sharing of best practices in preventing and combating fraud and illegal activities in south-eastern Europe, enhanced cooperation between anti-corruption agencies and the training of law-enforcement officers in using new methods of risk assessment applicable to investigation of crimes affecting the EU's financial interests.
- During 2019, following feedback and interest expressed by Member States concerning the data analysis tool, five pilot projects related to priority fraud issues were launched, two study visits were organised in Member States and a workshop was held with Member State experts.

LEGAL BASIS

Regulation (EU) No 331/2014 of the European Parliament and of the Council

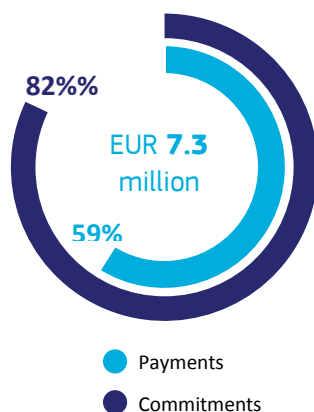
MORE INFORMATION

<http://europa.eu/Uu48PC>

FINANCIAL PROGRAMMING

(million EUR)

2014	0.9
2015	1.0
2016	1.0
2017	1.0
2018	1.1
2019	1.1
2020	1.1
Total	7.3

**OVERALL EXECUTION
(2014-2019)****Evaluations/
studies conducted**

The midterm evaluation of the Pericles 2020 programme was carried out in 2017. For further information please consult:

<http://europa.eu/kq94nP>

How is it implemented?

The Directorate-General for Economic and Financial Affairs is the lead DG for the implementation of the programme.

Projects financed under the programme are implemented either directly by the Commission (DG Economic and Financial Affairs) or in the form of grants awarded to national competent authorities in the EU (in both euro-area and non-euro-area Member States).

PERICLES 2020

EXCHANGE, ASSISTANCE AND TRAINING PROGRAMME FOR THE PROTECTION OF THE EURO AGAINST COUNTERFEITING

What is Pericles 2020?

The Pericles 2020 programme promotes actions for the protection and safeguarding of the euro against counterfeiting and related fraud.

The programme funds staff exchanges, seminars, training courses and studies for law enforcement and judicial authorities, banks and others involved in combating euro counterfeiting, along with the purchasing of equipment. Actions can take place in the euro area, in EU Member States outside the euro area and in non-EU countries. Since 2015 applications can be introduced by all 28 Member States' competent authorities to receive co-financing.

The programme's strategy focuses on four priority areas, namely:

- supporting EU Member States particularly affected by euro counterfeiting;
- fostering cooperation with non-EU countries where there is evidence or suspicion of counterfeit euro production;
- maintaining an efficient framework for the protection of the euro in south-eastern Europe; and
- addressing new developments and challenges.

The bodies eligible for funding under the programme shall be the competent national authorities. Pericles 2020 primarily provides assistance to national law enforcement agencies, national central banks, judicial authorities, mints, customs authorities, commercial banks, cash-operated industries and any other groups of specialists concerned.

**Specific objectives**

- To protect euro banknotes and coins against counterfeiting and related fraud, by supporting and supplementing the measures undertaken by the Member States and assisting the competent national and EU authorities in their efforts to develop, between themselves and with the European Commission, close and regular cooperation and the exchange of best practices, also where appropriate, including for non-EU countries and international organisations.

Why is it necessary?

The programme actively encourages and entails an increase in transnational cooperation for the protection of the euro inside and outside the EU and with the EU's trading partners, with attention being paid to those Member States or non-EU countries that have the highest rates of euro counterfeiting. This cooperation shall contribute to greater effectiveness in protecting the euro against counterfeiting through the sharing of best practices, common standards and joint specialised training.





Outlook for the 2021-2027 period

The Commission proposed a continuation of the programme for the next multiannual financial framework.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
1.0	2017	0.7	
1.0	2018	0.8	
1.1	2019	1.1	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Counterfeit euro banknotes detected in circulation ⁽¹⁾		 > 100%	0.6 m	0.7 million compared to a target of 0.6 million
Counterfeit euro coins detected in circulation ⁽¹⁾		 > 100%	0.2 m	0.2 million out of 0.2 million
Illegal workshops dismantled ^(1,2)		 64%	47	29 out of 47
Individuals arrested ^(1,2)		 > 100%	7 061	7 795 compared to a target of 7 061

 % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014-2019.

⁽²⁾ Latest results from 2018.

Where are we in the implementation?

- The commitments reached 99.3% of the overall budget for 2019, funding 13 actions in total. Altogether, 10 grants were successfully awarded from applications originating from the competent authorities of the Member States. Furthermore, three Commission actions were funded.
- The ten grants consisted of eight seminars/workshops and two staff exchanges with the objective of increasing knowledge and cooperation and sharing best practices on different aspects related to counterfeiting.
- The three Commission actions involved a meeting with euro-coin experts on the implementation of Regulation (EU) No 1210/2010 concerning authentication of euro coins and handling of euro coins unfit for circulation, hands-on training on the classification of counterfeit euro coins and technical training on the protection of euro coins.
- In 2019 the programme funded actions inside and outside the EU depending on the specific needs to protect the euro against counterfeiting. There was a specific focus on Latin America (the seminar organised by Spain in Chile and by Portugal involving Brazilian representatives), south-eastern Europe (actions organised by Bulgaria, Croatia, Italy and the Commission), newly covered geographical regions such as Africa and the Black Sea region, and China (a dedicated seminar organised by the Italian competent authority in Rome).

Performance assessment

- Pericles 2020 is achieving its objective of protecting euro banknotes and coins against counterfeiting and fraud by supporting the Member States and assisting the competent national and EU authorities. The programme has made a substantial contribution to the further improvement of coordination and cooperation at the international, EU and Member State levels, and has created more solid structures for the protection of the euro.
- The programme also contributed to the adoption of legislation aimed at improving euro protection and the establishment of national central offices.
- The midterm evaluation of the programme concluded that, in terms of effectiveness, Pericles 2020 actions were typically implemented as planned and achieved the intended outputs.
- Participant feedback provided immediately after events showed that 97% expressed a positive or highly positive view. More importantly, survey results show that a large proportion of participants claimed to have learned about best practices, acquired useful skills and established contacts with colleagues in other countries. The quality of actions was also judged positively by the authorities involved.
- One of the recommendations from the midterm evaluation was to encourage more competent national authorities to apply for the programme. This could be achieved by a more intense marketing strategy and by establishing contacts with high-level decision-makers to ensure the opportunities provided by the programme are well understood.
- Despite the fact that the counterfeiting phenomenon seems currently to be under control, it continues to be a major threat to the euro. The rise of 'sophisticated' counterfeits, the increasing availability of technology and the continued interest of organised crime groups in euro counterfeiting require continuous attention.

Concrete examples of achievements

559 000	187 602	23	5 932	13	565
counterfeit euro banknotes were detected in 2019 ⁽¹⁾ .	counterfeit euro coins were detected in 2019 ⁽¹⁾ .	illegal workshops (mints and print shops) were dismantled in 2019 ⁽¹⁾ .	individuals were arrested in 2019 ⁽¹⁾ .	seminars and exchange activities related to counterfeiting were funded in 2019.	people took part in the different activities funded in 2019 (estimated number).

⁽¹⁾ These indicators, while linked to the protection of the euro, are not directly related to the implementation of the programme.

LEGAL BASIS

Regulation (EU) 2015/1525 of the European Parliament and of the Council and Council Decision 2009/917/JHA

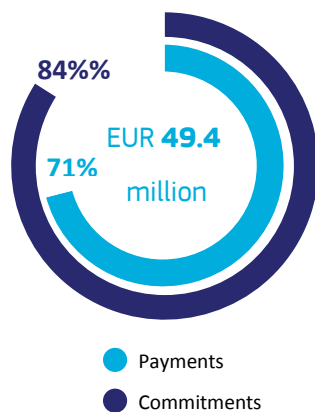
MORE INFORMATION

<http://europa.eu/!qh38yN>

FINANCIAL PROGRAMMING

(million EUR)

2014	6.4
2015	6.9
2016	6.6
2017	7.2
2018	7.7
2019	7.2
2020	7.5
Total	49.4

**OVERALL EXECUTION
(2014-2019)****How is it implemented?**

The European Anti-Fraud Office is the lead service for the implementation of the programme.

The programme is managed directly by the European Anti-Fraud Office through platform development (information technology systems).

AFIS

ANTI-FRAUD INFORMATION SYSTEM

What is AFIS?

The Anti-Fraud Information System (AFIS) is an umbrella term for a set of anti-fraud applications operated by the European Anti-Fraud Office under a common technical infrastructure aiming at the timely and secure exchange of fraud-related information between the competent national and EU administrations, along with storage and analysis of relevant data. The AFIS programme encompasses two major areas: mutual assistance in customs matters and irregularities management.

AFIS supports mutual assistance in customs matters with collaboration tools such as the Virtual Operations Coordination Unit used for joint customs operations, secure web mail (AFISMail), specific information exchange modules and databases like the Customs Information System and the Customs Investigation Files Identification Database, analysis tools like the Anti-Fraud Transit Information System and electronic workflow applications like the Tobacco Seizures Management Application.

AFIS also provides the Irregularities Management System, a secure electronic tool which allows the Member States to fulfil their obligation to report irregularities detected in agricultural, structural, cohesion and fisheries funds, the Asylum, Migration and Integration Fund, the Internal Security Fund Police, the Fund for European Aid to the Most Deprived and pre-accession aid. The tool supports the management and analysis of irregularities.

**Specific objectives****Supporting education and training**

- To support mutual assistance in customs matters through the provision of secure information exchange tools for joint operations and specific customs anti-fraud information exchange modules and databases such as the Customs Information System.
- To facilitate secure electronic communication tools for the Member States that allow them to fulfil their obligation to report irregularities detected in agricultural, structural, cohesion and fisheries funds and pre-accession aid.

Why is it necessary?

By the very nature of customs fraud, which occurs by definition in at least two countries, there is a continuing necessity for centralised action at the EU level. Effective sharing of information and a wide-scale fight against breaches of customs legislation cannot be conducted by national customs authorities alone at a reasonable cost. Systematic collection of the data required to analyse customs risks which pose a threat to the EU and its Member States would constitute a disproportionate effort for 27 individual Member States and can be achieved more effectively and efficiently through action at the EU level. Action at the EU level enables a significant improvement in risk management and the fight against customs-related fraud by increasing the

amount of evidence available, improving the possibilities for risk mitigation and detection and repression of fraud and rendering the action more efficient and effective.

Additionally, the AFIS Portal enables substantial economies of scale and synergies in the development, maintenance and operation of such a wide and diverse set of information technology services and tools.

Outlook for the 2021-2027 period

The Commission proposed a continuation of the programme for the next multiannual financial framework in the new anti-fraud programme, which will also include the Hercule III programme.

Voted budget execution (in million EUR)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
7.1	2017	6.4	
7.5	2018	6.7	
7.2	2019	7.5	

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
Mutual assistance – information exchange: number of active customs fraud cases	8 000	<div><div></div></div> 66%	24 000	18 639 out of 24 000 cases
Mutual assistance – number of joint customs operations ⁽¹⁾	3	<div><div></div></div> > 100%	7	9 operations achieved compared to a target of 7

 % of target achieved by the end of 2019

⁽¹⁾ Average of results for 2014–2019.

Where are we in the implementation?

- The development of a web service for the Customs Information System is planned for 2020. This interface will facilitate the automated import of cases from national systems and avoid the need for the same information to be entered multiple times in different systems by Member States' authorities. This will contribute towards increasing the number of active customs fraud cases which are available in the mutual assistance databases. In addition, it will also improve the completeness and quality of the available cases.
- New versions of the Container Status Messages Directory and the Import, Export and Transit Directory are planned for 2020, which will provide additional features such as enhanced search and data export capabilities, to improve the usability of the systems for analytical and investigative purposes. This will support the competent authorities in preventing, detecting and investigating customs fraud cases and, consequentially, lead to an increase in the number of active fraud cases in the mutual assistance databases.

Performance assessment

- The programme is well on track for the delivery of its objective of supporting the Member States and facilitating the exchange of information in relation to customs fraud.
- Since 2019, AFIS has offered a built-in online analytical tool which allows users to make use of and analyse data on reported irregularities.
- The interface with DG Taxation and Customs Union's Anti-Counterfeit and Anti-Piracy Information System went live in 2019. The development of this interface was originally supposed to start in 2014, but was delayed to 2017 due to the late go-live of the Anti-Counterfeit and Anti-Piracy Information System. As a consequence, the 2019 target for the number of customs fraud cases to be made available in the mutual assistance databases (indicator 1) has not been met and the corresponding 2020 target will most likely not be achieved.
- The programme is very much appreciated by its users. The 2019 satisfaction survey shows that the majority of users are satisfied with the AFIS applications. Of the respondents, 84% agreed or slightly agreed that the AFIS applications they use most frequently respond to their professional needs. As little as less than 5% of the respondents disagree to a certain extent (disagree: 1.5%; slightly disagree: 3.3%), while 10% of users remain neutral.

Concrete examples of achievements

EUR 12 million	EUR 4.2 million
of losses in customs duties and taxes was prevented by a single joint customs operation.	in counterfeit products was seized during the joint customs operation Hygiea.

- During one of the joint customs operations, Hygiea, which was carried out within the Asia–Europe Meeting, approximately 200 000 items of counterfeit perfumes, toothpastes and cosmetics, 120 tonnes of counterfeit detergents, shampoos and nappies, more than 4.2 million other counterfeit goods (battery cells, footwear, toys, tennis balls, shavers, electronic devices, etc.) and 44 tonnes of counterfeit waterpipe tobacco were seized by the participating Asian and EU customs authorities.

LEGAL BASIS

Regulation (EU) No 1316/2013 of the European Parliament and of the Council and Regulation (EU) 2015/1017 of the European Parliament and of the Council

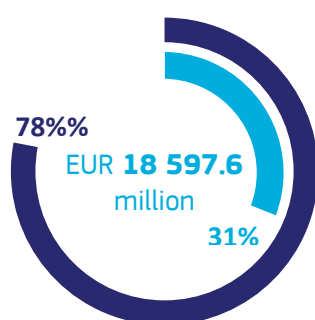
MORE INFORMATION

<https://europa.eu/!Px98ju>

FINANCIAL PROGRAMMING

(million EUR)

2014	1 976.2
2015	1 435.0
2016	2 134.5
2017	2 469.7
2018	2 747.9
2019	3 764.0
2020	4 070.3
Total	18 597.6

**OVERALL EXECUTION
(2014-2019)**

- Payments
- Commitments

**Evaluations/
studies conducted**

The midterm evaluation of the CEF was carried out in 2017. For further information please consult: <http://europa.eu/!Rc38MC>

How is it implemented?

The Directorate-General for Mobility and Transport is the lead DG for the implementation of the programme, in association with DG Energy and DG Communications Networks, Content and Technology. The CEF is implemented through direct management, mainly in the form of grants. In addition, it offers financial support to projects through innovative financial instruments such as guarantees and project bonds.

CEF

CONNECTING EUROPE FACILITY

What is the CEF?

The Connecting Europe Facility (CEF) is a key EU funding instrument to promote jobs, growth and competitiveness through targeted infrastructure investment at the EU level. It supports the development of high-performance, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments fill in the missing links in the EU's energy, transport and digital backbone.

**Specific objectives****CEF Transport**

- Removing bottlenecks, enhancing rail interoperability, bridging missing links and, in particular, improving cross-border sections.
- Ensuring sustainable and efficient transport systems in the long run, with a view to preparing for expected future transport flows, and enabling all modes of transport to be decarbonised through a transition to innovative low-carbon and energy-efficient transport technologies, while optimising safety.
- Optimising the integration and interconnection of transport modes and enhancing the interoperability of transport services, while ensuring the accessibility of transport infrastructures.

CEF Energy

- Increasing competitiveness by promoting the further integration of the internal energy market and the interoperability of electricity and gas networks across borders.
- Enhancing the security of the EU's energy supply.
- Contributing to sustainable development and the protection of the environment by integrating energy from renewable sources into the transmission network and by developing smart energy networks and carbon dioxide networks.

CEF Telecom

- Contributing to the interoperability, connectivity, sustainable deployment, operation and upgrading of trans-European digital service infrastructures and coordination at the EU level.
- Contributing to the efficient flow of private and public investments to stimulate the deployment and modernisation of broadband networks.

Why is it necessary?

CEF Transport makes travel easier and more sustainable. It contributes to the decarbonisation of the European economy by investing heavily in environmentally friendly transport modes, including railway for around 70% of the funding. CEF focuses on cross-border projects, efficient traffic management systems and alternative fuels, thus increasing safety and sustainability.

CEF Energy enhances the EU's energy security and enables wider use of renewables. It promotes the further integration of the internal energy market and the interoperability of electricity and gas networks across borders, and ensures that no Member State is isolated. It enhances EU security of supply and contributes to

sustainable development and protection of the environment by fostering the integration of more renewable electricity.

CEF Telecom facilitates cross-border interactions between public administrations, businesses and citizens. It supports the vision of public services being digital and cross-border. It also promotes free wireless connectivity in local communities and stimulates investment for deploying and modernising broadband networks, therefore sustaining the digital single market.


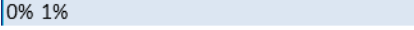
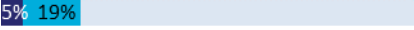
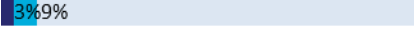
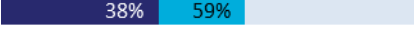




Outlook for the 2021-2027 period


The Commission proposed a continuation of the


Voted budget execution (in EUR million)

EXECUTED COMMITMENTS		EXECUTED PAYMENTS	
2.464,2		2017	920.9
2.747,5		2018	1 389.1
3.758,7		2019	1 753.5

Key performance indicators

	Baseline	PROGRESS TOWARDS THE TARGET	Target	Results
CEF transport – volume of private, public or public-private partnership investment in projects of common interest (billion EUR)		 49%	49.3 b	EUR 24.0 billion out of EUR 49.3 billion
CEF transport – lines in service equipped with the European Railway Traffic Management System		 0% 1%	6 537	30 km (estimated value: 40) out of 6 537 km ⁽¹⁾
CEF transport – new sections with increased capacity and bottlenecks removed		 5% 19%	306	16 (estimated value: 58) out of 306 bottlenecks removed ⁽¹⁾
CEF transport – number of supply points for alternative fuels		 3% 9%	12 933	379 (estimated value: 1 130) out of 12 933 ⁽¹⁾
CEF transport – improved or new connections between ports through motorways of the sea		 38% 59%	29	11 (estimated value: 17) out of 29
CEF energy – system resilience – number of Member States	3	 75%	22	18 out of 22
CEF energy – Member States with diversified gas supply sources	19	 100%	26	26 out of 26
CEF telecom – citizens using public services online	57%	 79%	70%	67% out of a target of 70%
CEF telecom – availability of cross-border public services		 78%	100%	78% out of a target of 100%

 2019 actual results, as a % of the target

 2019 estimated values, as a % of the target ⁽¹⁾

⁽¹⁾ Estimated values represent project results to be completed by 2019 based on the contractual delivery dates in the signed grant agreement – see explanation below under ‘Performance assessment’.

Where are we in the implementation?

CEF Transport.

- At the end of 2019, 794 projects were selected for co-financing under the CEF Transport calls, and individual grant agreements were signed for a total CEF contribution of EUR 21.4 billion. This amount represents around 95% of the total CEF Transport budget. In 2019, three calls under CEF Transport were launched (CEF Transport annual work programme, multiannual work programme and blending facility) for a total amount of EUR 1.7 billion.
- The financial progress of projects aiming at removing bottlenecks, enhancing rail interoperability, bridging missing links and improving cross-border sections is estimated to have been 47% by the end of 2019. Changes to the initial implementation plans have occurred for some projects, with 188 formal amendments signed for 160 projects. A total of 140 projects have been extended (on average for 18 months), and funding was reduced for 71 projects. As a consequence, thanks to the application of the use-it-or-lose-it principle, an overall available amount of EUR 2.3 billion is being reinjected via new calls for proposals.
- The financial progress of projects aiming at ensuring sustainable and efficient transport systems (including decarbonisation) is estimated to have been 44% by the end of 2019. Changes to the initial implementation plans have occurred for 55 projects. A total of 43 projects have been extended (on average for 13 months), and funding was reduced for 10 projects. As a consequence, an overall available amount of EUR 54 million is being reinjected via new calls for proposals.
- The financial progress of projects aiming at optimising the integration and interconnection of transport modes and enhancing the interoperability of transport services, while ensuring the accessibility of transport infrastructures, is estimated to have been 69% by the end of 2019. Changes to the initial implementation plans have occurred for a number of projects, with 123 formal amendments signed for 101 projects. A total of 75 projects have been extended (on average for 13 months), and funding was reduced for 30 projects. As a consequence, an overall available amount of EUR 175 million is being reinjected via new calls for proposals.

CEF Energy.

- By the end of 2019 nearly 40 projects of common interest had been implemented. In the 2014-2019 period CEF Energy made available a total amount of EUR 3.8 billion in co-funding allocated to 139 actions contributing to 95 projects of common interest. At the end of 2019, 76 actions were ongoing amounting to EUR 3.57 billion in EU support distributed to projects of common interest linking the energy systems across the Member States and helping the EU achieve its energy policy and climate objectives. Nineteen actions contributing to the implementation of projects of common interest. Also in 2019, a total of EUR 556 million in CEF grants was allocated to eight projects of common interest. Of these grants, six were for projects in the electricity sector and two for projects in the gas sector. Six of the projects related to studies and two to construction works.

CEF Telecom.

- With an overall investment of almost EUR 200 million in the core service platforms, the Commission is enabling the EU-wide interoperability of specific digital services such as eHealth, Public Open Data, eID and Cybersecurity. The uptake of these services with CEF support reached a portfolio of 500 projects in the Member States and participating countries in the European Economic Area by the end of 2019, most of which are still being implemented. With an EU contribution of almost EUR 300 million in generic services and an overall leveraged amount of more than EUR 400 million, CEF digital services support EU citizens, businesses and public administrations in interconnecting and adapting their systems to become interoperable across borders. As regards the connectivity actions, three calls for proposals were launched under the WiFi4EU initiative to allocate 7 980 vouchers to municipalities (EUR 120 million).

CEF financial instruments.

- A total of EUR 14.3 billion in investment has been raised by the instrument in the transport sector, including EUR 5.8 billion since 2014. In the energy sector, no projects have yet been selected under the instrument. EUR 89 million is still available for energy projects currently under appraisal by the European Investment Bank. Suitable projects are still to be selected under the CEF debt instrument in the telecom sector. The Connecting Europe broadband fund (CEF equity instrument) was launched in 2018 and has so far raised EUR 420 million. The three first projects were selected in 2019.

Performance assessment

- CEF Transport and CEF Energy are characterised by long implementation times for grants for construction works related to large and technically complex infrastructure projects. In addition, delays may occur for various reasons, including securing sufficient co-funding (national or other sources); public procurement issues, such as complaints and appeals during tender procedures; and legal and environmental issues, for instance permitting, spatial planning, other authorisations and land acquisition. In this context, the majority of CEF projects will be completed between 2021 and 2023 and their results (outputs) will be displayed beyond the end of the current programming period.
- As regards the assessment of results, CEF actions are considered closed, and are therefore reported on, only once the final report from the beneficiary has been received and assessed, the outputs verified and the final payment processed. Consequently, during the action-implementation period, the results achieved are not measured. The average period between the end date of the project and its closure is around 15 months, as project promoters have 12 months to prepare and submit the final report. The final payment must occur in principle within 90 days of the receipt of the payment request. The estimated values in the 'Key performance indicators' table reflect this gap between the end date of the project and the date of final payment.
- The targets presented in the 'Key performance indicators' graph are based on contracts signed: they represent the aggregation of contractually agreed targets for each project, rather than the overarching goals defined at the beginning of the programme. Accordingly, these targets are reviewed every year to integrate newly signed projects and changes occurred to ongoing projects as assessed by the Innovation and Networks Executive Agency.
- In this context, through the Innovation and Networks Executive Agency, the Commission closely monitors the progress on the ground. In particular, the agency assesses reports, performs on-site visits and follows up with CEF beneficiaries on the possible delays experienced. It provides a thorough assessment and identifies actions for which amendments are needed (the use-it-or-lose-it principle, as explained in the 'Where are we in the implementation?' section).
- The implementation of CEF Transport shows that CEF actions contribute to the overall EU policy goals supporting the completion of a high-performance and sustainable trans-European transport network with the aim of accomplishing the internal market, stimulating job creation and allowing the seamless mobility of passengers and freight around the EU. The CEF Transport strand strongly contributes to the overall objectives of the trans-European transport network policy, co-funding projects along the core and comprehensive transport networks through important investments tackling key missing links and bottlenecks and with a specific focus on the nine core network corridors. Within this framework, the programme concentrates its efforts on projects aiming at ensuring a decarbonised and digitalised transport sector in the EU.
- Moreover, important progress has been made in identifying new financing opportunities for transport infrastructure projects. Thanks to the new provisions of the financial regulation, as revised in 2018, and the good results achieved by the 2017 CEF Transport blending call in the course of 2019, the Commission launched the CEF Transport blending facility. The facility represented a new opportunity to boost the participation of private-sector investors and financial institutions in projects contributing to the environmental sustainability and efficiency of the transport sector in the EU. The facility remains open for applications over a longer period of time than classical calls for proposals, which allows for better predictability and mature projects. This increases the possibility of attracting co-financing from financial institutions and ensuring that projects are implemented within the planned time frame and budget. Since its launch in mid November 2019, nine public financial institutions have already joined the facility, nearly half of which are from cohesion countries or specialise in those countries. This gives the facility broader geographic coverage, allowing more projects to be signed.
- It should also be noted that in order to reach critical mass in the intended investment, finance bigger projects and exploit the economies of scale, the financial instruments under CEF Transport were transferred to the European Fund for Strategic Investments as from 2015.
- CEF Energy financially supports the realisation of projects of common interest that have a significant impact on energy markets and market integration (covering at least two Member States) and contribute to the EU's energy security. CEF Energy provides financial assistance to a number of energy infrastructure projects that aim at diversifying sources – increasing competition in energy markets by offering alternatives to consumers – and that are critical to delivering the European Green Deal and the climate-neutrality objective. It is a strong catalyst for bringing together project promoters, national regulatory authorities and government representatives to ensure that cross-border infrastructure projects can be realised. Its grant component promotes cooperation between Member States to develop and implement energy interconnection projects that otherwise would not happen. This is especially the case for cross-border projects located in Member States with smaller population sizes or in a more remote locations, where energy tariffs would need to be increased substantially to cover the investment needs. The Celtic Electricity Interconnector between Ireland and France is one of the examples of a project that could not have been funded in a purely national context and that enables the integration of additional renewable electricity.
- CEF Telecom supports the deployment of cross-border interoperable digital service infrastructures. In this context, CEF Telecom is proving its added value by supporting Member States, and in particular public administrations, to become interoperable in various areas such as health, justice, social security information, e-government, disinformation, digital skills and cybersecurity. The investment is two-sided: (1) 'core service platforms' are the central hubs that provide, for each digital service, trans-European interconnections (e.g. the Business Register Interconnection System), access (e.g. Cybersecurity) and interoperability (e.g. eID); (2) by means of grants, 'generic services' refer to the Member States' projects themselves, linking the nationally developed solutions to the core service platform. Together, they ensure the availability of interoperable solutions and contribute to reaching a sufficient number of participants in the Member States to ensure their actual use ('critical mass'). The benefits of this approach are already being felt on the ground: the Member States are experiencing the added value of co-investing in interoperability solutions thanks to the EU's support, and are starting to further invest in their deployment even without a CEF grant. The programme addresses a clear gap by enabling cross-border interoperability, and as such it is an enabler of the digital single market. That is why it is proposed that the sustainability of some of these solutions is retained in the next multiannual financial framework, as part of the new Digital Europe Programme. Also, as part of the WiFi4EU initiative, CEF Telecom supports the installation of free networks in 7 980 local communities in the EU to ensure free Wi-Fi connectivity. This local connectivity approach, focused on providing access rather than building bandwidth, has demonstrated itself to be a good complement to fibre technology, which is usually financed by European Structural Funds or financial instruments. It has also enabled the creation of about 30 000 European networks of local communities dedicated to connectivity issues, on which other connectivity projects, based for instance on 5G, will build on in the next programming period.
- It has also enabled the creation of a European network of local communities dedicated to connectivity issues, on which other connectivity projects, based for instance on 5G, will build in the next programming period.
- Throughout the current programming period, the Commission has continued to work on the improvement of the programme's performance. In particular, following the midterm evaluation of the CEF and in line with the recommendations of the European Court of Auditors' reports, some areas for improvement were identified. Notably, due to differences in the sectoral legal frameworks, the programme faced limitations in achieving cross-sectoral synergies. In addition, as a follow-up to the finding that the programme would benefit from more transparency and predictability, the draft CEF 2021-2027 legal basis includes the possibility to adopt joint work programmes covering specific priorities from several sectors, and the removal of obstacles that have hampered synergies in the current period. It would also be possible to include in sector-specific funding synergetic elements pertaining to another sector. Moreover, with a view to increasing transparency and predictability, limiting the procedures and ensuring overall consistency, the common understanding reached on the draft CEF regulation in March 2019 also contains the requirement to adopt multiannual work programmes that include the timetable of the calls for proposals for the first 3 years of the programme, their topics and their indicative budget, along with a prospective framework covering the entire programming period.

Concrete examples of achievements

- **Railway.** The 'Knappenrode–Horka–German/Polish border section: upgrade, electrification and European Train Control System planning' CEF action contributed to the double-track upgrade and the electrification of the railway line between Knappenrode and the German/Polish border, along the core trans-European transport network. The upgrade and electrification improved the rail freight transport connection between the German/Polish border and central Germany (Magdeburg), and further to Bremen/Bremerhaven and other destinations. It also contributed to reducing CO₂ emissions.
- **Inland Waterways.** The 'Enhancing the efficiency of Hungarian river information services operations' CEF action contributed to the enhancement of the river information services system in order to support efficient and safe inland navigation on the Danube. The works carried out through the action enhanced traffic management services, modernised on-shore river information services and improved the quality of fairway information services data.
- **Maritime.** The 'Zero emission ferries – a green link across the Oresund' CEF action covered the introduction of new and innovative concepts and technology by converting two existing complex passenger ships – originally fuelled by heavy oil – to plug-in all-electric-powered operations that exclusively use batteries. The action has brought a more environmentally friendly solution to a very busy maritime link, connecting the comprehensive trans-European transport network ports of Helsingør (Denmark) and Helsingborg (Sweden). Moreover, the power-provision and charging installations required in the ports/ferry terminals were put in place. The project supported the development of clean motorways of the sea by testing and deploying new technological solutions in real operational conditions.
- **Road.** The 'Alternative fuels in Slovakia and Poland' CEF action was implemented in the two Member States along the North Sea–Baltic, Baltic–Adriatic, Orient/East-Med and Rhine–Danube core network corridors. It concerned a study with an integrated pilot scheme for the deployment of 10 multi-standard fast-charging stations for electric vehicles in Slovakia and 75 in Poland, three of them including battery storage to cover peak demand. Overall, the action contributed to decarbonisation and to the rolling-out of alternative fuels in the EU.
- **Energy.** In the energy sector, several projects of common interest supported by CEF grants for works and studies were completed in 2019: the 'Twinning of Scotland onshore system between Cluden and Brighthouse Bay; the Baltconnector, aiming to interconnect the natural-gas-transmission networks between Estonia and Finland; the Internal electricity line in Latvia, part of the increase in the electricity capacity of the Latvia–Sweden cluster; the construction of an electricity interconnector between France and the United Kingdom; and the Trans-Anatolian Pipeline in Turkey, which will connect Turkey to the EU in 2020 via the Trans Adriatic Pipeline. Significant progress in construction works has also been made, notably regarding the internal electricity lines in Bulgaria and Romania; the Poland–Slovakia gas interconnector, the completion of which will be a significant step towards enhancing the resilience and diversification of the EU's gas supply; and the Trans Europa Naturgas Pipeline and its innovative deodorisation facility, removing odorants in gas which enters the pipeline and allowing the import of gas from France via Switzerland into Germany.
- **Cybersecurity.** The cybersecurity digital service infrastructure contributes to EU preparedness to deal with cyberthreats by increasing the cybersecurity capabilities of key cybersecurity players. In this context, 57 cybersecurity projects are being deployed in 22 Member States. The CyberExchange project, for example, brings together 10 Member States and strengthens their know-how, capabilities and cross-border cooperation.
- **Health.** The eHealth digital service infrastructure facilitates continuity of care and patient safety for citizens seeking cross-border healthcare, allowing health data to be exchanged across national borders. The cross-border 'ePrescriptions/eDispensations' service allows patients, while abroad, to receive the equivalent medication they would receive in their home country. The 'patient summary' services provide health professionals with access to the verified key health data of a patient needing unplanned cross-border healthcare.
- **WiFi4EU.** Some 8 000 municipalities started installing WiFi4EU networks in 2019. Wifi4EU encourages and supports local public authorities to offer free Wi-Fi connectivity by awarding each of them a voucher worth EUR 15 000 to install Wi-Fi networks. A third of all municipalities in the EU (26 500 registrations) participated to the first three Wifi4EU calls.