



ECDC CORPORATE

Single Programming Document

2019–2021

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Abbreviations

ABAC	Accrual-Based Accounting, the EC integrated budgetary and accounting system
AMR	Antimicrobial resistance
ARHAI	Antimicrobial resistance and healthcare-associated infections
ASPHER	Association of Schools of Public Health in the European Region
CAF	Common Assessment Framework
CCB	Coordinating Competent Body
CDC	Centers for Disease Control and Prevention, USA
CDTR	Communicable disease threats reports
CHAFEA	Consumers, Health, Agriculture and Food Executive Agency
CPCG	Committee on procurement, contracts and grants
CPDP	ECDC Continuous Professional Development Programme
CRM	Customer Relationship Management
Decision 1082/2013/EU	Decision No 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health
DPO	Data protection officer
CONT	Committee for Budgetary Control of the European Parliament
EA	Enterprise architecture
EEA	European Environment Agency
EAAD	European Antibiotic Awareness Day
EARS-Net	European Antimicrobial Resistance Surveillance Network
EEA/EFTA	European Economic Area/European Free Trade Association
EEAS	European External Action Service
EHFG	European Health Forum Gastein
eIIS	Electronic immunisation information systems
ELiTE	European Listeria Typing Exercise
ELDSNet	European Legionnaires' Disease Surveillance Network
EFSA	European Food Safety Authority
EMA	European Medicines Agency
EMCDDA	European Monitoring Centre for Drugs and Drug Addiction
ENP	European Neighbourhood Policy
ENPI	European Neighbourhood and Partnerships Instrument (or ENI – European Neighbourhood Instrument)
ENVI	Committee on the Environment, Public Health and Food Safety of the European Parliament
EOC	Emergency Operations Centre
EPIET	Epidemiology path of the ECDC fellowship programme
EPIS	Epidemic Intelligence Information System
EpiNorth	Cooperation Project for Communicable Disease Control in Northern Europe
EQA	External quality assessment
ERLI-Net	European Reference Laboratory Network for Human Influenza
ESAC-Net	European Surveillance of Antimicrobial Consumption Network
ESCAIDE	European Scientific Conference on Applied Infectious Disease Epidemiology
EU	European Union
EUCAST	European Committee on Antimicrobial Susceptibility Testing
EUPHEM	Public health microbiology path of the ECDC Fellowship Programme
EuroCJD	European and allied countries collaborative study group of Creutzfeldt-Jakob disease
EuSCAPE	European survey on carbapenemase-producing <i>Enterobacteriaceae</i>
EVAP	WHO European Vaccine Action Plan 2015–2020
EVD	Emerging and vector-borne diseases
EWRS	Early Warning and Response System
FRA	European Union Agency for Fundamental Rights
FWD	Food- and waterborne diseases and zoonoses
HAI	Healthcare-associated infections
HAI-Net	Healthcare-Associated Infections Surveillance Network
HIV	Human immunodeficiency virus
HSH	HIV, sexually transmitted infections and viral hepatitis
ICT	Information and communication technology
IHR	International Health Regulations
IRV	Influenza and other respiratory viruses
MediPIET	Mediterranean Programme for Intervention Epidemiology Training

MERS-CoV	Middle East respiratory syndrome coronavirus
MMR	Measles, mumps and rubella
MRSA	Meticillin-resistant <i>Staphylococcus aureus</i>
NFP	National Focal Point
NMFPs	National microbiology focal points
OCP	Operational contact points
OCS	Office of the Chief Scientist
PHC	Public Health Capacity and Communication unit
RMC	Resource Management and Coordination unit
RRA	Rapid risk assessment
SACS	Scientific Advice Coordination Section
SARMS	Scientific Advice Repository and Management System
SAS	Scientific Assessment Section
SLA	Service level agreement
SMAP	Strategic multiannual work programme
SMT	Senior management team
SRS	Surveillance and Response Support unit
STEC	Shiga toxin-producing <i>Escherichia coli</i>
STI	Sexually transmitted infections
TB	Tuberculosis
TESSy	The European Surveillance System
VBORNET	European Network for Arthropod Vector Surveillance for Human Public Health
VectorNet	European Network for Arthropod Vector Surveillance for Human Public Health and Animal Health
VENICE	Vaccine European New Integrated Collaboration Effort
VPD	Vaccine-preventable diseases
VTEC	Verocytotoxin-producing <i>Escherichia coli</i>
WGS	Whole genome sequencing
WHO	World Health Organization
WHO/Europe	World Health Organization, Regional Office for Europe

ECDC IT systems

System/application

Early Warning and Response System (EWRS)

Epidemic Intelligence Information System (EPIS)

The European Surveillance System (TESSy)

Threat Tracking Tool (TTT)

Emergency Operations Centre Intranet (EOC)

ECDC web portal

Surveillance Atlas of Infectious Diseases

Eurosurveillance website

ECDC extranets

ECDC Virtual Academy

Customer Relationship Management (CRM)

Description

Supports critical communication about serious cross-border health threats, in accordance with decision 1082, through an email-based platform between the Member States, the European Commission, other EU agencies, and WHO.

Supports risk assessment of public health events that may represent a serious cross-border health threat as per decision 1082 through an ECDC-moderated communication platform (e.g. European Legionnaires' Disease Surveillance Network, the EPIS platform for food- and waterborne diseases and others).

Supports collection, validation, cleaning, analysis and dissemination of data for public health surveillance, provided by EU Member States and other associated countries.

Supports the collaboration and management of public health threats, including the preparation of regular daily round table reports and weekly communicable disease threats reports.

A set of IT solutions that provides access to information on public health emergencies and supports their management.

ECDC's web site and as such the main tool for external communication; the site offers outputs for public health professionals and information for the public. The current portal, supported by a content management system, was launched in June 2017.

Launched in 2014, this tool provides interactive visual access to surveillance data. It is accessible through ECDC's web portal. The Atlas covers most communicable diseases that ECDC monitors and has been significantly expanded over the last few years.

Supports the publication of Eurosurveillance, a scientific journal on communicable diseases which ranks among the top-10 journals in its field. An updated publication platform with interactive features was launched in September 2017.

Support collaboration of public health networks, working groups and institutional bodies (MB and AF). Currently ECDC manages >20 extranets. In 2016, a major migration to an updated platform took place, making new functionalities available and bringing improvements to the user interface.

Launched in 2016, the Virtual Academy allows ECDC to offer e-learning to support its public health training activities.

A business system that manages contacts, relationships (internal and external) and interactions with ECDC stakeholders. Supports the

	centralised management of Member State and other contacts.
Intranet	Tool for internal communication and support of internal processes.
Document/Records Management System (DMS/RM)	Supports the management of electronic documents; provides a single point of access to the Centre's documents (document management) and records (records management).
E-mail system	Supports electronic internal and external communication.
Remote access to ECDC systems	Allows the continuity of work by ECDC staff when away from the Centre's premises, e.g. during missions and on stand-by duty.
Scientific Advice Repository and Management System (SARMS)	Supports the monitoring of ECDC outputs with scientific content from production to clearance and dissemination.
IRIS	A tool developed to help prioritising scientific advice activities and support the Centre's work plan development, based on questions of impartiality, resources, impact and significance. It uses the EUSurvey online tool (DG DIGIT).
ECED	ECDC expert directory is a roster of external experts that allows ECDC to widen the number of experts and areas of knowledge and skills beyond its own expert staff and expertise.
ECDC Library	The Library provides information delivery services and offers tools to ease the access to information. The Library's collection is in digital and print formats) and can be accessed through the Library Intranet or in the library rooms at ECDC.
ECDC KM Services	Knowledge Management Service is a collective term, describing terminology services, the talent map, and enterprise search.
Terminology Services (TS)	A system for shared professional vocabularies in order to improve the terminological consistency of ECDC documents; also used for consistent metadata tagging.
Enterprise Search (ES)	A single, unified search interface to retrieve information on ECDC from various systems. Available via the ECDC Intranet.
Talent (Map TaMa)	An internal database that collects professional competences of ECDC staff members; participation is voluntary.
Management Information System (MIS)	Internal system used to plan and monitor the implementation of the annual work programme.

Foreword

2019 will be a year of transformation for Europe: a new European Parliament will be elected, a new European Commission will be in office, the United Kingdom is scheduled to leave the Union on 29 March, and the final agreement on the new multiannual financial framework 2021-2027 for the EU will be adopted.

Despite these changes, ECDC will further demonstrate its efficiency and usefulness by providing added value in the area of European public health. The Centre will embrace technological challenges that will change – or already have changed – the way we work at the EU and Member State level, for example Big Data, e-health, whole genome sequencing, and social media.

In the wake of the 2017 Rome Declaration for a strong and secure Europe in the world¹, and based on the provisions of Article 168 of the European Treaty², ECDC's role and contribution has become even more essential because of the shared responsibility between the EU and the Member States to protect and improve human health against major cross-border threats.

In 2019, ECDC will continue to contribute to health security, giving particular attention to the following areas:

- Tackle antimicrobial resistance
- Improve vaccine coverage in the EU
- Support the European Commission and the Member States in addressing the Sustainable Development Goals³ in the area of HIV, TB and hepatitis
- Further support the European Commission and the Member States in strengthening the preparedness for cross-border health threats
- Focus on strategic partnerships to create synergy and avoid duplication of work
- Further enhance ECDC's performance and monitoring.

In 2019 and 2020, ECDC will continue to implement its Strategic Multi-annual Programme 2014–2020 (SMAP). The SMAP – after a 2016 mid-term review by the Management Board – was integrated in the multiannual section of the Single Programming Document. In 2019–2020, ECDC will produce a new long-term strategy that will guide the Centre's efforts for the years ahead; implementation is scheduled for 2021. This strategy will draw on the results of ECDC third external evaluation covering the years 2012–2017, which was launched in 2018 and is expected to be completed in 2019. Other input will come from other evaluations, for example those on the ECDC surveillance systems (EPHESUS project), on ECDC's Disease Programmes, and on the ECDC Fellowship Programme.

In this context, the Single Programming Document constitutes an essential element for the guidance of ECDC's work and its resource allocation. The Document follows the standard template used by all EU agencies. Its presentation and structure ensures that ECDC's commitments are clearly presented and explained to the Centre's stakeholders, putting them in a position to efficiently monitor the Centre's progress during 2019.

Andrea Ammon, MD, PhD

Director ECDC

¹ <http://www.consilium.europa.eu/en/press/press-releases/2017/03/25-rome-declaration/>

² Art. 168-5 of the Treaty on the Functioning of the European Union (TFEU) on the role of the EU 'in the area of major cross-border health scourges, measures concerning monitoring, early warning of and combating serious cross-border threats to health'.

³ <http://www.un.org/sustainabledevelopment/>

Background

Legal and procedural background

This document is based on Regulation (EC) N° 851/2004 of the European Parliament and of the Council of 21 April 2004, Article 14.5(d): [The Management Board shall:] 'adopt, before 31 January each year, the Centre's programme of work for the coming year.'

Following its forty-fourth meeting on 13–14 November 2018, the Management Board approved the final version of the ECDC Single Programming Document 2019–2021.

Mission statement

The Centre's mission is laid down in Article 3 of the Founding Regulation⁴, which states:

'The mission of the Centre shall be to identify, assess and communicate current and emerging threats to human health from communicable diseases. In the case of other outbreaks of illness of unknown origin, which may spread within or to the Community, the Centre shall act on its own initiative until the source of the outbreak is known. In the case of an outbreak which clearly is not caused by a communicable disease, the Centre shall act only in cooperation with the competent authority, upon request from that authority.'

The Centre's mandate can be derived from Article 168 of the Treaty on the Functioning of the European Union (EU), which states an overarching principle ensuring a high level of human health protection in the definition and implementation of all Union policies and activities.

Key tasks of ECDC include the following activities:

- Operating dedicated surveillance networks
- Providing scientific opinions and promoting and initiating studies
- Operating the Early Warning and Response System
- Providing scientific and technical assistance and training
- Identifying emerging health threats
- Collecting and analysing data
- Communicating on its activities to key audiences.

ECDC operates in accordance with its core values: service orientation, focus on quality, and 'one ECDC'.

ECDC vision

ECDC is a strong and trusted partner enabling and supporting the Member States and the European Commission in protecting everyone in the EU equitably from communicable diseases.

Strategic work areas

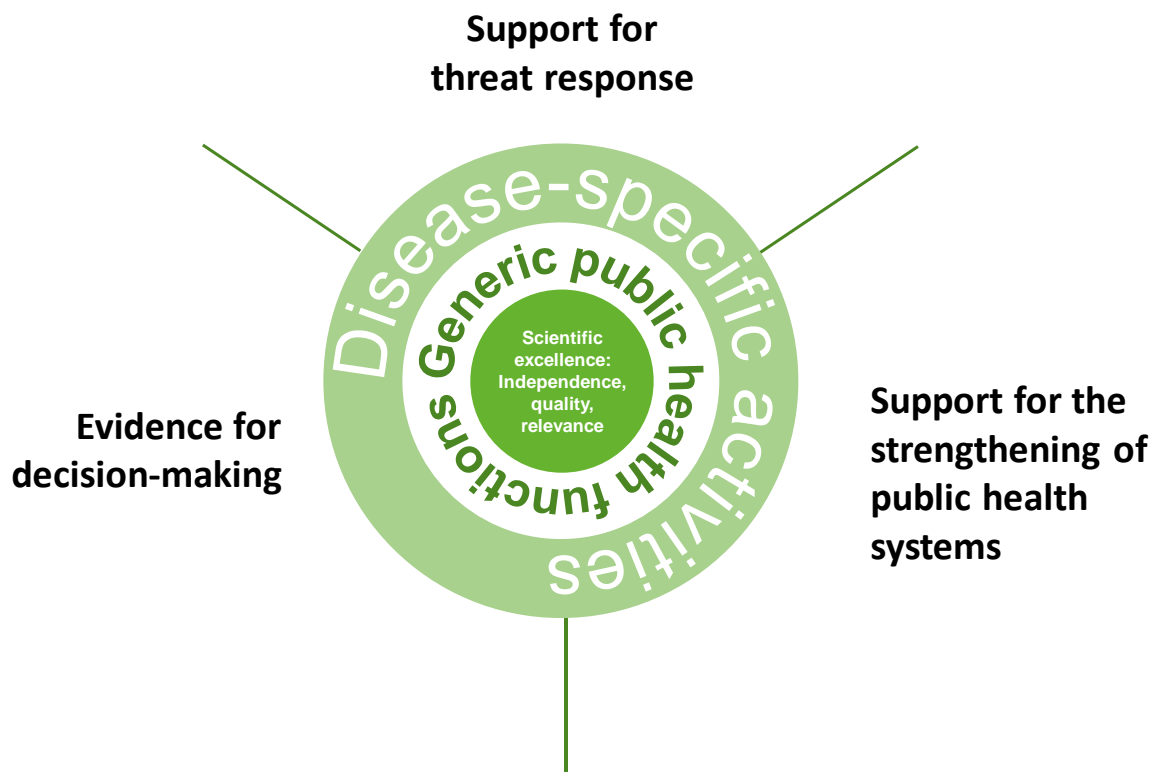
- Providing evidence for effective and efficient decision-making: We support efficient public health decision-making by providing timely, accurate and relevant information.
- Support the strengthening of public health systems: We strengthen European capacities and capabilities to effectively prevent and control communicable diseases.
- Supporting response to threats: We support effective health threats detection, assessment and control.

⁴ Regulation (EC) No 851/2004 of the European Parliament and of the Council of 21 April 2004 establishing a European centre for disease prevention and control, Official Journal of the European Union. 2004; L 142:1–11.

How we work

- Our work is founded on scientific excellence: independence, quality and relevance.
- We deliver through disease-specific activities and through generic public health functions.
- We carry out our work in partnership with our stakeholders.
- Our work is supported by efficient administrative and IT tools and services.
- The way we work is inspired by our core values.

Figure 1. ECDC's work areas



1. General context

Recent experiences in public health show that despite increased scientific knowledge, there is no absolute certainty that pandemics can be predicted and completely prevented. Horizon scanning cannot directly detect mutations and adaptations of pathogens, but preparedness can increase our ability to prevent outbreaks, and our response may mitigate severe consequences.

The global dimensions of communicable diseases put pressure on all EU countries and forces them to cooperate globally and ready their public health defence systems and public health infrastructure. While the threats and determinants of communicable diseases remain the same, limited resources require the prioritisation of actions and improved efficiency, both at the EU and national levels.

In order to fulfil its mandate and be a strong and trusted partner that supports the Member States and the European Commission in protecting all EU citizens from communicable diseases, ECDC focuses on the following strategic objectives:

- Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission
- Support efficient decision-making by enabling the sharing of evidence and expertise
- Support the strengthening of public health infrastructure and processes
- Support the strengthening of public health workforce capacity and capability
- Timely detect serious cross-border health threats
- Coordinate and support the rapid assessment of risks and the identification of options for response
- Support national and international response in the field
- Prepare for the future by assessing and analysing the potential impact and benefits brought about by technical and scientific advances⁵.

Political context

2019 will be a year of transformation for Europe: a new European Parliament will be elected, a new European Commission will be in office, the United Kingdom is scheduled to leave the Union on 29 March, and the final agreement on the new multiannual financial framework 2021-2027 for the EU, should be adopted.

The departure of the United Kingdom from the European Union will have an impact on the Centre, in terms of budget, but also staff, procurement and contracts. The extent of impact will depend of the ongoing negotiations between the European Commission and the United Kingdom. ECDC is closely following the development of the negotiations and will, in agreement with the European Commission, reassess and adapt its work programme for as required.

Despite these changes, ECDC will further demonstrate its efficiency and usefulness by providing added value in the area of European public health. The Centre will embrace technological challenges that will change – or already have changed – the way we work at the EU and Member State level, for example Big Data, e-health, whole genome sequencing, and social media.

In the wake of the 2017 Rome Declaration for a strong and secure Europe in the world¹, and based on the provisions of Article 168 of the European Treaty², ECDC's role and contribution has become even more essential because of the responsibility of the EU and the Member States to protect and improve human health against major cross-border threats.

In 2019 and 2020, ECDC will continue to implement its Strategic Multiannual Programme 2014–2020 (SMAP). The SMAP – after a 2016 mid-term review by the Management Board – was integrated in the multiannual section of the Single Programming Document. In 2019–2020, ECDC will produce a new long-term strategy that will guide the Centre's efforts for the years ahead; implementation is scheduled for 2021. This strategy will draw on the results of an external evaluation covering the years 2012–2017, which was launched in 2018 and is expected to be completed in 2019. Other input will come from other evaluations, for example those on the ECDC surveillance systems (EPHESUS project), on ECDC's Disease Programmes, and on the ECDC Fellowship Programme.

⁵ For example, whole genome sequencing, genetic engineering for new vaccines, e-health, metagenomics, IT technologies for citizen-based disease surveillance, big data, use of social media for surveillance, e-learning.

Major determinants and priorities

In 2019, ECDC will contribute to strengthen health security in Europe by giving particular attention to the following areas:

- Tackle antimicrobial resistance, particularly by supporting the European One Health Action Plan against Antimicrobial Resistance. Antimicrobial resistance poses an increasing threat to our healthcare achievements and has gained wider recognition by the adoption of a Global Action Plan on Antimicrobial Resistance (WHO). ECDC will continue and intensify the cooperation with, and support for, a wide variety of stakeholders. A coordinated approach has been adopted to increase awareness and bring about behavioural change. Options on how to increase synergy in the collaboration with other EU agencies will be further explored, esp. with EFSA and other stakeholders in the 'One Health' approach.
- Improve vaccine coverage in the EU by tackling vaccination hesitancy. Together with strengthened preparedness, improved vaccination coverage is high on the list of the European Commission's political priorities. Growing hesitancy towards the value of vaccines from the general public and healthcare professionals risk to undermine the positive impact of immunisation programmes.
- Support the European Commission and the Member States in addressing the Sustainable Development Goals⁶ in the areas of HIV, tuberculosis and hepatitis.
- Further support the European Commission and the Member States in strengthening the preparedness for cross-border health threats in line with the IHR (2005).
- Focus on strategic partnerships to create synergy and avoid duplication of work. ECDC will actively support the Member States through the newly established ECDC's country support strategy mechanism, which will allow for a better understanding of the countries' needs and help ECDC focus its support. ECDC will also further develop relationships with external partners such as relevant EU agencies, the WHO, and other centres for disease control.
- Further enhance ECDC's performance and monitoring through clear and efficient internal processes and electronic workflows that empower ECDC staff.

Political developments, for example the massive stream of migrants and refugees, have increased the need of an integrated EU approach to vulnerable groups, which includes specific provisions regarding communicable diseases and vaccination coverage. Ecological and climate changes impact the introduction and dispersion of new vectors for diseases. This requires improved monitoring and modelling of environmental and climatic conditions and their impact in order to inform preparedness activities.

ECDC will seek synergies and consider collaboration, subject to available resources, with ongoing research projects (e.g. Horizon 2020) and other relevant research or capacity-building projects that lie within the scope of the Centre's mandate).

⁶ <http://www.un.org/sustainabledevelopment/>

2. Multi-annual programming 2019–2021

2.1. Multi-annual objectives

Providing evidence for effective and efficient decision-making

- Strategic objective 1: Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission⁷.
- Strategic objective 2: Support efficient decision-making by enabling the sharing of evidence and expertise⁸.

ECDC will continue to produce evidence-based, scientifically sound and independent assessments, guidance and advice. A stronger focus will be laid on the usability of ECDC outputs for decision makers and the presentation of scientific facts to inform politicians at various levels to strengthen public health, increase health security and tackle inequalities.

Support the strengthening of public health systems

- Strategic objective 3: Support the strengthening of public health infrastructure and processes⁹.
- Strategic objective 4: Support the strengthening of public health workforce capacity and capability¹⁰.

ECDC's capacity-building and other support activities will be better tailored to the needs of the Member States. To meet this challenge, ECDC will invest more in strategic partnerships and ensure collaboration with all actors in the field; an improved coordination of activities should result in synergies.

Supporting the response to threats

- Strategic objective 5: Timely detect serious cross-border health threats¹¹.
- Strategic objective 6: Coordinate and support the rapid assessment of risks and the identification of options for response.
- Strategic objective 7: Support national and international response in the field.

ECDC will continue to provide epidemic intelligence on serious EU cross-border health threats and produce timely rapid risk assessments, including options for response. Upon request, ECDC will provide technical support to affected countries, both in the EU and in other countries if relevant.

- Cross-cutting objective 8: To further improve efficiency and clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery. This approach must focus on the way that information is managed. It will also create opportunities for both scientific and non-scientific staff to develop and utilise their skills in the most effective way.
- Cross-cutting objective 9: Prepare for future external challenges, through assessment and analysis of potential impact and benefits brought about by technological and scientific advances¹² and the implementation of innovations in the field of communicable disease prevention and control.

⁷ This includes: generic and disease-specific epidemiological and microbiological guidance, systematic reviews and expert opinions on the control and prevention of infectious diseases; surveillance reports; health communication materials and advice; gap analyses to inform the setting of research priorities; methodological guidance and toolkits.

⁸ This includes: the publication of *Eurosurveillance*; the organisation of ESCAIDE; convening expert and advisory meetings (e.g. disease and public health network meetings, ECDC Advisory Forum meetings); supporting communities of practice.

⁹ This includes: preparedness guidance and toolkits, needs assessments, generic and disease-specific country peer review visits, simulation exercises, laboratory support and support to implementation of Decision 1082/2013/EU and IHR. It also includes the cooperation and coordination with WHO, other agencies and institutions in third countries and cooperation with enlargement and neighbourhood countries.

¹⁰ This includes: the ECDC Fellowship Programme (EPIET/EUPHEM), the ECDC Continuous Professional Development Programme (CPDP), the ECDC Virtual Academy (EVA), ad hoc training requested by the Member States, twinning, expert exchange and collaboration with other training partners across Europe. All these training activities seek to develop workforce competences, necessary to strengthen the capacities and capabilities of public health systems.

¹¹ This includes: all epidemic intelligence activities, EPIS, molecular cluster detection, EWRS operation.

¹² For example whole genome sequencing, e-health, metagenomics, big data, IT technologies for citizen-based surveillance of communicable diseases, and use of social media (crowdsourcing) for epidemic intelligence, apps, e-learning, genetic engineering for the development of new vaccines, climate change.

Multiannual indicators

	Multiannual objective	Indicator	Baseline 2017	Target 2021	Verification
1	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Proportion of ongoing and completed ECDC scientific outputs, available on the ECDC website	n/a	At least 90% of the ECDC scientific outputs planned	Annual plan of scientific outputs
2	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Use of the surveillance Atlas by external users Use of surveillance reports	1 293 page views (July–Dec. 2017) <i>N.B. new website launched in June 2017</i> Surveillance reports downloaded 319 times on average	+10% per year +10% per year	Web statistics Downloads of surveillance reports and number of citations of annual epidemiological reports and enhanced surveillance reports
3	Support efficient decision-making by enabling the sharing of evidence and expertise	Impact factor of Eurosurveillance	7.2	>5	Journal Citation Reports, Thomson Reuters, SCImago
4	Support the strengthening of public health infrastructure and processes	Proportion of Member State finding EULabCap country reports useful for their laboratory infrastructures and processes improvement	n/a	70 % response of Member State; satisfaction >70% of respondents	Report from annual survey on Competent Bodies' feedback on usefulness of EULabCap report
5	Support the strengthening of public health workforce capacity and capability	Proportion of target population of professionals (NFPs and OCPs) trained on cross-border threats prevention and control	n/a	30% of target population trained	Target based on the ongoing training needs assessment conducted with Member State, CRM
6	Timely detect serious cross border health threats	Number of connections on CDTR	3.365 views (July–December 2017) On average 316 PDF downloads per issue <i>N.B. new website launched in June 2017</i>	At least +10% per year	ECDC website statistics
7	Coordinate and support the rapid assessment of risks and the identification of options for response	Average number of PDF downloads for ECDC rapid risk assessments	325 downloads per item on average	At least +10% per year	ECDC website statistics
8	Support national and international response in the field	Proportion of requests for response in the field that were granted by ECDC	100%	100% of requests positively replied	SRS Unit statistics
9	Further improve efficiency and clarify responsibilities in close cooperation with relevant stakeholders while retaining control over quality and service delivery.	Proportion of activities Implementation of the Annual Work Programme Timeliness of digitalised key processes Percentage of budget committed (C1) and percentage of payments executed (C1) in the same year as the commitment	90% n/a 99.8% committed 81.7 paid	>85% 80% processes on time 100% committed; 80% paid minimum	Management Information System As per list of key processes (covers processes for which digitalisation has been completed) Monthly monitoring report

2.2. Strategic areas of operation

2.2.1 Surveillance and epidemic intelligence

Surveillance

By the end of 2021 the following objectives will be achieved:

1. The ECDC surveillance platforms support the timely detection of threats and the steering of EU/EEA and Member State prevention and control programmes [strategic objective 5].

Reliable and user-friendly tools for the collection of surveillance data, together with simplified and semi-automated surveillance processes reduced the burden for the Member States. ECDC surveillance tools are interoperable, allowing for timelier data exchange, analysis and assessment of threats. Enhanced surveillance outputs through the online Disease Atlas, business intelligence platform, threat-monitoring dashboards include indicators, event-based data and determinants (e.g. international travel data, vector distribution) and advanced analytical approaches (e.g. modelling) make surveillance data more useful for decision makers.

2. All EU/EEA indicator-based surveillance systems will have been evaluated. As a result, objectives for surveillance are updated and minimum surveillance standards are defined to optimise surveillance operations while minimising the burden on Member States [strategic objective 2].

EU/EEA surveillance system weaknesses will have been identified and corrected (or targeted for correction) to ensure that each system meets its objectives in the most efficient way, generating the information required by the European Commission and the Member States for effective public health prioritisation and action. The collection of surveillance data is driven by the outputs required by ECDC stakeholders, which reduces the overall reporting burden of Member States. Based on evaluations, ECDC and the Member States will have agreed on minimum surveillance standards and monitoring indicators for the surveillance systems evaluated during 2017–2020.

3. The inclusion of molecular typing and sequencing into surveillance will have been consolidated for the diseases prioritised at the European level [strategic objective 2].

The surveillance systems that use molecular typing and sequencing information run smoothly and meet their objectives. Typing and sequencing data for additional diseases are included as per roadmap. All systems are regularly evaluated for their performance and impact against agreed indicators; systems are either improved or discontinued if information is neither useful nor used.

4. ECDC and the Member States will have developed and piloted a list of defined surveillance indicators for steering disease programmes and detecting changes requiring possible intervention [strategic objective 2].

Indicator-based surveillance addresses two main complementary objectives: it provides:

- indicators to allow steering disease-specific prevention and control programmes, and
- indicators for the detection of outbreaks or changes in epidemiological patterns that require a public health response.

Indicators for steering prevention and control programmes have an assigned target value, while changes in epidemiological patterns are detected by a threshold value. Both types of indicators are also given a quality index (e.g. completeness). This approach aims at detecting changes timely. This also improves the management of (disease) programmes, thanks to enriched surveillance data with meaningful targets and thresholds. After a pilot in 2019, implementation is scheduled for 2020.

5. ECDC will have explored more frequent reporting of epidemic-prone diseases [strategic objective 2].

For epidemic-prone diseases, ECDC plans to complement its routine surveillance with more frequent reporting of key information to ensure the timely detection of cross-border outbreaks. Examples are the monthly monitoring of *Salmonella* serotypes, measles, rubella and Zika virus. The expansion of this approach to other diseases will be considered in agreement with the National Focal Points for surveillance and communicable diseases. Diseases that require more frequent data collection will not significantly add to the workload because only a few necessary variables are required. ECDC aims to analyse and disseminate these data with the same frequency as before.

6. Assess the feasibility and added value of using existing electronic health data in Member States for EU surveillance.

In 2019, ECDC will start playing a proactive role in the field of exploiting eHealth for infectious disease surveillance by establishing an eHealth taskforce and eHealth strategy. A technology impact assessment will be performed, as well as an inventory of data and technological requirements for exploiting digital health information for surveillance. A series of proof-of-concept studies is planned for 2020.

Epidemic intelligence

By the end of 2021, the following objectives will be achieved:

1. All EPIS platforms are interoperable with each other and with the EWRS, thus providing an integrated set of platforms that supports the Member States and the European Commission in their implementation of Decision 1082/2013/EU (in the area of threat detection and assessment)[strategic objective 5].

With regard to the implementation of Decision 1082/2013/EU, the chain of communication and responsibilities also includes the health security committee (HSC). As a consequence, supporting tools for threat detection and assessment need to be adjusted to ensure the appropriate escalation of events at each level, e.g. from technical issues up to the political and decision-making level. The ongoing Surveillance System Reengineering Project will include an update of the EPIS platforms and consider, among other topics, the development of platforms for disease programmes currently not benefiting from this tool.

As the operator of the EPIS and EWRS platforms, ECDC will direct the adjustment process, together with the Member States and the European Commission. This process will also be shared and discussed with the HSC.

2. Threat detection as part of event surveillance will be improved [strategic objective 5].

ECDC conducts daily screenings on an extended range of different information sources. The improvement of the platforms and tools used by the Epidemic Intelligence team will continue. Starting in 2018, additional attention will be given to social media as a source for signals. The Surveillance System Reengineering Project will integrate the surveillance and epidemic intelligence tools (i.e. TTT, EPIS, EWRS and TESSy) to enhance the detection and validation of signals.

The aggregators routinely used in epidemic intelligence will be further evaluated and modified to enhance the quality and significance of the signal detection. Mobile applications developed at ECDC will allow for improved availability and dissemination of outputs.

2.2.2 Scientific advice and microbiology

Scientific advice

Independence, scientific quality and transparency are essential elements of ECDC's work; these qualities will result in tangible benefits for European public health and ensure continued trust in ECDC and its output. ECDC scientific outputs, including ECDC scientific advice, aim to provide the best available evidence and expertise to support informed decisions and actions taken by policymakers, public health professionals, and other stakeholders.

By the end of 2021, the following objectives will be achieved:

1. ECDC has consolidated its position as a primary source of transparent, high-quality and useful scientific advice on infectious diseases [strategic objectives 1 and 2].

2. ECDC continues its work to increase scientific excellence, integrity, transparency and the application of evidence-based principles and methods, as well as good scientific practice for the development of all its scientific outputs, including scientific advice.

ECDC will actively involve key stakeholders, in particular the European Commission and the EU Member States, in the identification and prioritisation of areas that would benefit from ECDC scientific work and advice. To achieve this goal, ECDC will collaborate and cooperate with scientific and public health partners in the Member States, commission qualified counterparts to conduct topic-specific work, invest in appropriate resources, and apply validated standards and approaches for conducting, analysing and reporting the results of its scientific work. All ECDC scientific outputs will comply with ECDC policies on independence, open access and authorship, and follow recognised reporting standards as well as consider remaining areas of uncertainty and knowledge gaps.

In addition, ECDC will work to promote its scientific outputs through various adapted communication channels, including ESCAIDE, ECDC's annual scientific conference on applied infectious disease epidemiology. The Centre will reach out to clearly defined target audiences to support informed decisions and actions in order to strengthen Europe's defences against infectious diseases.

2. ECDC's responsiveness to requests for scientific advice is systematically monitored for efficiency [strategic objectives 1 and 2].

Responsiveness to stakeholders' requests for scientific advice should be proportionate to the identified and prioritised public health needs, the public health urgency, and the availability of resources. ECDC will monitor its responsiveness to scientific advice requests through the ECDC Scientific Advice Repository and Management System (SARMS) and ensure that all requests are addressed and answered appropriately within a mutually agreed timeframe.

Microbiology

ECDC's approach to microbiology is dependent on the European Commission's position regarding a future EU laboratory strategy, developed in collaboration with ECDC and WHO. A joint laboratory strategy would bring further clarity to the tasks of ECDC and the development of objectives.

By the end of 2021, the following objectives will be achieved:

1. ECDC has assessed the capacity levels of the EU public health microbiology system for the EU-wide surveillance of communicable diseases and epidemic preparedness. ECDC's assessment is based on indicators that were jointly developed with the Member States. The Centre has reviewed, together with the Member States and the European Commission, the validity and usefulness of this information [strategic objective 3].

By 2020, the EU laboratory and capacity monitoring (EULabCap) scheme has repeatedly assessed the laboratory capacities and capabilities in the Member States and at the EU level. This capacity should be in line with existing EU guidance and regulations. EULabCap should also show to which extent the EU has reached 'sufficient' levels of laboratory services (public health surveillance, threat detection, risk assessment, support to outbreak response). In 2017, ECDC reviewed – together with the Member States and the European Commission – the validity and usefulness of the information provided by EULabCap and used it as an evidence base to inform policy development and country support actions; by 2020, the next capacity level of surveillance and epidemic preparedness should be achieved, provided that sufficient support and resources are available. Collaboration between Member States could significantly contribute to the this goal.

2. Well-administered and effective external quality assessments (EQA) schemes complement the efforts of the Member States, WHO and the European Commission. They are accompanied by technical guidance and expert training [strategic objective 3].

External quality assessments have their roots in the disease networks that are now integrated into ECDC. ECDC's coordination of EQA schemes is much valued by the Member States and provides opportunities for improvement and mutual exchange. ECDC's EQAs focus on strengthening public health surveillance and threat detection testing. In 2020, all EQAs are run by ECDC's Disease Programmes and are complementary to other activities in this field that are managed by the Member States, WHO and the European Commission. EQA schemes are in line with recent developments in molecular typing, most notably whole genome sequencing (WGS). These and other new technologies in public health surveillance and control need qualified experts. ECDC addresses this need through its fellowship programme and training/guidance for experts, as well as twinning and exchange programmes within the various disease networks.

3. Collaborative efforts in Member States are guided by a strategic roadmap for the integration of molecular and genomic typing data into disease surveillance. The roadmap will be regularly updated. This approach optimises the efficiency of EU-wide surveillance of high-priority diseases and antimicrobial resistance [strategic objective 2].

Rapid developments in molecular typing affect the strategic roadmap. Whole genome sequencing (WGS) offers significant cost-efficiency gains as a multi-purpose technology for pathogen identification and characterisation. ECDC's 'molecular typing for surveillance taskforce' helped the Centre define a WGS strategy for public health applications and produced a proposal on the prioritisation of genomic typing for surveillance. The technological advances in molecular typing increase the risk of inequities between the Member States and raise the question of resource allocation. Molecular typing is useful for outbreak alerts and investigations but can also contribute to inform prevention policies, reduce the burden of communicable diseases, and support monitoring the dissemination of antimicrobial resistance and vaccine effectiveness. By 2020, ECDC will – together with the Member States – monitor the development of national genomic-based surveillance capacities. The objective is to further update the strategic roadmap and ensure, in collaboration with Member States, that the integration of genomic typing data into surveillance addresses the most important priorities, thus adding EU-wide value within the available resources.

4. The further integration of EU clinical laboratories, public health laboratories, and veterinary laboratories will have resulted in a joint, integrated One Health report on human and zoonotic pathogens [strategic objective 3].

Joint ECDC–EFSA reporting on zoonotic diseases and antimicrobial resistance has made major progress over the last few years. The quality of these joint reports will improve through further harmonisation of surveillance methodology in the human and veterinary sectors, which will strengthen data integration and joint analysis. This will lead to more relevant information and open new perspectives for decision makers. Using harmonised methodologies and interoperative databases to type strains and characterise antimicrobial resistance will contribute significantly to the 'One Health' approach and ensure the availability of information that is essential for risk assessments.

2.2.3 Training and capacity building

Training

By the end of 2021, the following objectives will be achieved:

1. The Continuous Professional Development Programme (CPDP) is fully operational. It provides training for Member State professionals engaged in cross-border communicable disease control [strategic objective 4].

There is a clear need to focus on continuous professional development of mid-career and senior professionals in public health whose work focuses on the cross-border aspects of communicable disease control. The National Focal Points in the coordinating competent bodies (CCBs) will prioritise and help shape the content of CPDP training activities. The CPDP aims to meet the institutional needs of the CCBs with regard to a competent workforce that is sufficiently skilled to effectively work to address cross-border health threats and interact with experts at ECDC, in other countries and other international organisations at the EU-level. Training activities should be based on a list of discipline-specific core competencies that ensure the prevention, detection, assessment and control of communicable disease threats with cross-border dimensions as well as effective preparedness for such threats. The term 'programme' refers to a programmatic approach to planning, organising and evaluating these training activities together with the CCB partners – as opposed to a programme that focusses on individual training activities. The CPDP contains a core part (the CPDP Core Course, the ECDC Summer School, and the ECDC Senior Exchange Initiative) that covers wide range of generic competences. E-learning will offer ease of access and greater reach. CPDP training offerings will rely on an in-kind contribution of Member State experts for teaching and facilitation.

2. The ECDC Fellowship Programme (EPIET/EUPHEM) will be the main programme for junior and mid-career professionals, with a special focus on countries that have benefited less from the Programme than other Member States [strategic objective 4].

The Fellowship Programme targets junior experts, with a focus on surveillance and outbreak detection and control. The previously separate epidemiology (EPIET) and public health microbiology (EUPHEM) pathways were combined in what is now known as the 'Fellowship Programme'. Depending on the background of the trainees and their competency profiles, adjustments in individual training activities can now be made easier than under the previous system. An external evaluation of the Programme started in 2018. The results will be used to discuss further changes. Multidisciplinary investigations are encouraged, including partnerships with other EU agencies (e.g. EFSA and its fellowship programme for food risk assessors). Countries with no experience in hosting a fellow will receive special support.

3. The ECDC Virtual Academy will be fully operational, offering free distance learning courses for European public health professionals. Virtual Academy courses offer a blended¹³ learning approach to support ECDC's training efforts for the primary target group defined in ECDC's Public Health Training Strategy [strategic objective 4].

Capacity building and training will gradually offer both standalone and blended learning, for the primary target group in ECDC's Public Health Training Strategy: national experts with formal roles in the ECDC Coordinating Competent Bodies network (national focal points, operational contact points, national coordinators, and their alternates). E-learning will be utilised to train experts that are not part of the primary target audience. It also offers personalised training for a wider target group.

ECDC will offer Member States access to e-learning platforms to facilitate the production of localised, translated courses and materials and to facilitate the internal cascading of training in the countries. The platforms represent ECDC's contribution; the Member States take a shared responsibility for the modules and the adaptation of the content. It is expected that national public health institutes will benefit most, particularly the ones actively involved in the Continuous Professional Development Programme. The development of a network of online moderators and course managers will be key in the operational success of ECDC distance learning.

4. The creation of a network of trained professionals, the provision of didactic tools and training materials will facilitate the cascading¹⁴ of training, led by National Focal Points for Training [strategic objective 4].

By the end of 2021, ECDC will have provided guidance on didactics and training tools as well as access to training materials. Participation in the CPDP and the ECDC Fellowship Programme will imply the participants' commitment to conduct and thus cascade training. ECDC will facilitate the creation of a 'faculty of online moderators and facilitators'. Moderators and facilitators will be primarily recruited among the participants of the training programme and the supervisors of the Fellowship Programme. Collaboration with stakeholders (e.g. ASPHER, the Association of Schools of Public Health in the European Region) will make it possible to expand the faculty of the CPDP and

¹³ Blended: mixed face-to-face and e-learning activities.

¹⁴ Cascading: Transferring acquired knowledge and skills to others.

Fellowship Programme, and ensure the complementarity of ECDC training efforts with existing initiatives. This includes the creation of communities of practice and the exchange of experience and tools among trainers.

5. All training offerings will be based on a needs assessment, based on annual consultations and regular surveys at the EU level. New tools will be developed so that Member States can conduct surveys at the national and subnational level [strategic objective 4].

The assessment of country capacities, training resources and training needs is key to any capacity building strategy. Annual consultations with the National Focal Points for Training will continue in order to identify training needs and align the training strategy at the EU and national levels. ECDC will regularly organise surveys on country capacities, training resources and training needs in the network of Coordinating Competent Bodies. Results will be complemented by a gap analysis. Additional needs will be identified through the new ECDC country support mechanism. Because of the diversity of the public health systems and the multiple professional disciplines involved, the methodology and assessment tools to be developed will have to be aligned with other international partners (e.g. WHO) so they properly reflect the national and regional situation in the participating countries. Career paths and training strategies will be taken into account when adapting tools and methodology.

Coordinated country support

By the end of 2021, the following objective will be achieved:

1. Capacity support to Member States will have become an integrated, coordinated and sustainable ECDC activity; it is based on expressed needs and available resources [strategic objective 3].

The second external evaluation of ECDC explicitly recommended that the Centre should 'get closer to the countries'. A better understanding of the variety of health systems and a systematic assessment of the country needs will allow for a more effective investment of ECDC resources. The Centre's activities in this area also support the Commission's 'State of Health in the EU' initiative that aims to strengthen country-specific and EU-wide knowledge on health.

Based on the ECDC's 2016 country support strategy, a system has been implemented which let the Member States countries express their need for support. Request for support received by ECDC are prioritised and evaluated. They form the basis for formal support agreements between ECDC and a country or a group of countries. This approach was gradually implemented following a pilot in 2017. Building on the present CRM system, ECDC established a country information system that keeps track of all interactions between ECDC and the Member States. By 2021, this will have resulted in a coordinated approach in response to country needs, based on clear agreements and a comprehensive understanding of national public health needs.

International relations

The ECDC International Relations Policy 2020, approved by the ECDC Management Board in November 2017, is fully aligned with the relevant external EU policy frameworks. The implementation of the identified priorities and strategic objectives relies on a set of guiding principles on coordination and partnership. The first principle is about the coordination of activities concerning relevant Commission services and the European External Action Service through the Directorate-General for Health and Food Safety (SANTE).

By the end of 2021, the following objectives will be achieved (in accordance with the priorities of the ECDC International Relations Policy 2020):

1. The capacities of all EU enlargement countries with regard to the prevention and control of communicable diseases will have been assessed. This includes the countries' progress towards the implementation of the EU acquis. Technical pre-accession collaboration with ECDC has progressively increased the involvement of the enlargement countries in ECDC activities and helped them to implement actions to strengthen their communicable disease prevention and control systems [strategic objective 3].

2. ECDC will have continued to conduct at least one technical country assessment each year, as requested by the European Commission. ECDC will also continue to support countries in developing action plans based on these assessment and follow the progress made in the implementation. Due to the changing EU acquis and global external assessments, assessment tools will be continually adapted to the changing situation.

Towards the end of 2019, ECDC will have provided further support for EU enlargement countries towards full participation in ECDC work and communicable disease surveillance activities in the EU. This will be achieved through external funding for anticipated follow-up actions, based on EU-added value. The capacity of enlargement countries to participate in selected disease networks and report surveillance data on mutually agreed diseases to TESSy as per EU acquis at the level of minimum ECDC requirements and standards will be increased. ECDC will also conduct a second EULabCap survey on microbiology laboratory capacities and provide individual country reports. This enables the monitoring of key public health microbiology capabilities and capacity for surveillance and epidemic preparedness, including comparison and benchmarking, for example against EU levels (on the basis of the EULabCap results) within the Western Balkan region. ECDC will also continue to monitor the capacity of countries to actively participate in EPIS-FWD and EPIS-ELDSNet platforms. If participation in those ECDC epidemic

intelligence information systems yields a mutual added value, EU enlargement countries will be integrated in all thematic EPIS platforms by 2020.

In the context of ECDC's pre-accession technical assistance activities, appointed senior experts will participate as observers in ECDC's National Focal Point forums for microbiology, preparedness and response, threat detection (epidemic intelligence), and surveillance. To facilitate EU pre-accession measures, ECDC will further support enlargement countries in their efforts to become active members of ECDC networks and activities. This will be achieved through the exchange of EU-level practices, regional dialogues, and awareness raising in the field of communicable disease surveillance, detection, preparedness, and response to current and emerging threats to human health.

3. ECDC will have produced a set of procedures, tools and contact information for efficient and timely technical cooperation with ENP (European Neighbourhood Policy) countries. In accordance with existing EU/ENP partner countries agreements, ECDC will aim at supporting the adoption of standards that approximate EU standards in communicable disease prevention and control, thus contributing to health security in the countries along the external EU borders [strategic objective 4].

ECDC's cooperation with the ENP partner countries aims at supporting the overall policy objective of the European Neighbourhood Policy, namely to bring these countries closer to EU standards, through exchange of best practices and approximation of practises and legislation, and to foster health security in the countries closest to EU borders by strengthening country capacities so that ENP partner countries are able to respond effectively to health threats related to communicable diseases.

ECDC will aim at continuing the collaboration with ENP partner countries, provided the availability of EU external funding. Step-by-step, ENP partner countries will be integrated into the work of ECDC, through participation in regular ECDC network meetings, scientific conferences (e.g. ESCAIDE), training events, and progressive integration of ENP experts to selected thematic EPIS platforms. All these activities will be evaluated; a positive outcome will lead to an extension.

ECDC will continue to support the European Commission in the implementation of the new Association Agreements between the EU and three eastern partnership countries (Georgia, Moldova and Ukraine). Upon request, and based on an assessment of communicable disease prevention and control systems in these countries, using the same methodology as in EU enlargement countries, ECDC will provide support in developing an action plan. ECDC will also support the European Commission in monitoring the implementation of the action plan, within the framework of the Association Agreement.

The implementation of these activities will be subject to the availability of external EU funding.

If a mechanism for long-term and sustainable funding and programme governance can be established, ECDC will remain a close partner of the MediPIET network and could take on the scientific advisory role.

4. ECDC will be a close partner of major centres for disease prevention and control across the globe, a trusted provider of data and scientific evidence, with the capacity to mobilise EU expertise in order to provide technical support and assistance (e.g. for outbreak investigations, risk assessments) [all strategic objectives].

In order to achieve this objective – and with a view to support the continuous improvement of threat detection and risk assessment through cooperation with the major competent public health agencies and organisations (e.g. other centres for disease prevention and control, WHO Regional Office for Europe) outside the EU/EEA – ECDC will continue implementing and monitoring the existing bilateral agreements between ECDC and the main global CDCs. ECDC will also systematically harmonise the implementation of these agreements, including regular follow-up meetings to ensure effective coordination.

ECDC will further establish itself as a close partner to major international outbreak response mechanisms, with the capacity to mobilise EU expertise to support outbreak response in the field. This requires to develop a strategic approach on how ECDC can support such activities (scope, direction, priorities, partnerships, methods).

2.2.4. Preparedness and response

Preparedness

By the end of 2021, the following objectives will be achieved:

1. Continued technical support on cross-border threats to health will be provided to EU Member States and the European Commission, through a collaborative process, in order to strengthen public health emergency preparedness in accordance with Decision 1082/2013/EU and the International Health Regulations (IHR 2005) [strategic objective 3].

ECDC will continue to produce tools and guidance to help raise the level of public health emergency preparedness in the Member States. Emphasis will be on strengthening strategic partnerships and technical support, including regional and country-specific on-site support. Activities include simulation exercises (including capacity building for

health emergencies and biosecurity planning and response), strengthening the evidence base for emergency risk ranking, emergency incident reviews, and presentations of good evaluation practices, all in close collaboration with relevant stakeholders (e.g. WHO/Europe) in order to avoid duplication of work and limit the work load for Member States.

2. Support the exchange of knowledge and good practices among relevant professionals and organisations at EU and regional levels in order to further strengthen competences and capabilities for health security [strategic objective 4].

Through the organisation of National Focal Points (NFPs) meetings, expert workshops on thematic issues, cross-border and cross-sectoral training, simulation exercises, and the promotion of operational studies in public health emergency preparedness, ECDC will have created a strong functional network of country preparedness and response experts that will be able to identify and address critical aspects of public health system vulnerabilities and engage in effective technical cooperation between countries and agencies. Activities include the collection and dissemination of best practices, exchange of experiences, and peer consultations.

3. ECDC will have strengthened communication capacity, as part of EU Member State preparedness, by sharing knowledge, data and analysis. ECDC will have provided technical support for the risk and crisis communication capacities of Member States as part of generic preparedness planning under Decision 1082/2013/EU [strategic objective 2].

In line with the ECDC strategy on country support, ECDC will have engaged with the EU Member States to identify their needs, respond to those needs, and strengthen emergency risk communication capacity in the Member States as part of national preparedness planning. ECDC will continue to support the Member States by providing training in the area of emergency risk communication. The Centre will also facilitate networking, sharing of knowledge and information on best practices among the National Focal Points for Communication within the overall ECDC Coordinating Competent Bodies structure.

ECDC communication activities support Decision 1082/2013 in two distinct ways:

- support countries with the provision of risk assessments and;
- support countries to develop appropriate risk communication preparedness and capacities.

ECDC risk assessments play a critical role in the emergency risk communication process by providing independent evidence with a pan-European focus to support appropriate management responses. ECDC will play a key role in supporting the coordination of communication processes, as laid down in Decision 1082/2013/EU, by ensuring that the Health Security Committee receives timely and objective information upon which to base its decisions.

Emergency risk communication preparedness and capacity building are also fundamental building blocks to successfully manage outbreaks. ECDC will continually work with the countries to identify needs (e.g. communication materials, tools or training) to allow them to deal with health-related risks and crisis communications. Member States require different support options to implement Decision 1082/2013/EU, and the ECDC communication, training and preparedness teams will work together to deliver the appropriate type of support.

Response

Response to serious cross border events is a responsibility of Member States. ECDC activities are aiming at supporting Member States in this regard. By the end of 2021 the following objectives will be achieved:

1. The production of rapid risk assessments (RRA) for emerging threats is strengthened by allowing Member States national focal points to contribute to their production and review on a dedicated platform [strategic objective 6].

The rapid risk assessments for emerging threats to the EU is an output valued by Member States for its timeliness and scientific soundness. It allows Member States to rapidly access the latest information on emerging threats and to get options for their prevention and control, based on the most updated available evidence. The process for their production will be further enhanced by allowing Member States to directly access RRA in progress and provide contribution.

2. ECDC response support function has been strengthened on the basis of lessons learnt during the Ebola outbreak, in the EU/EEA countries, as well as beyond the EU [strategic objective 6].

The experience gained during the Ebola outbreak have shown the added value of ECDC in the mobilisation of public health response teams, in and beyond the EU/EEA. ECDC will have strengthened its preparedness to address requests for technical support, and be ready to react swiftly and appropriately. Procedures and tools will be developed in liaison with Member States and the European Commission services to guarantee that ECDC can act as the established source of technical support, including the identification of experts and mechanisms for logistics, communications, coordination between Member States, and tools for rapid deployment in the field.

3. The ECDC Emergency Operation Centre (EOC) will be further strengthened to support ECDC in its coordination role for risk assessment during public health emergencies [strategic objective 5].

The ECDC Emergency Operation Centre has been instrumental in allowing ECDC to support Member States in their response to the Ebola epidemic. The dispatching of around one hundred experts in the field, coming from Member States and from ECDC has highlighted the need to strengthen the communication function as well as the provision of remote support to the teams. These functions will be strengthened in liaison with the European Commission and the Member States

4. The ECDC will further strengthen Member States and Commission support in maintaining the safety of Substances of human origin (SoHO) [strategic objective 1,2].

ECDC has been assessing the risks of infectious diseases transmission through SoHO. Preparedness plans, evaluation of the value of introducing new regulations (e.g. the prevention of sexually transmitted infections through SoHO) and biannual evaluation of national screening policies have been recognised as useful and constructive activities at the European and global levels.

2.2.5 Communication

By the end of 2021 the following objectives will be achieved:

1. ECDC will have efficiently reached out to its stakeholders with scientific and technical outputs that are timely, easily accessible, impactful, reusable and adapted to the needs of ECDC's target audiences, ensuring that ECDC's products will have an additional value for decision makers [strategic objectives 1 and 2].

The web portal is at the core of ECDC communication activities. It is focussed on the needs of the users ('user-centric') and adaptable to new technological developments and trends. It is easily searchable and fully supports audiovisual content, ranging from maps, infographics and data visualisations to contemporary video and audio formats. ECDC is moving to generating more web-based content appropriate for, and easily used by, the news media. Media outreach and social media outreach will be integrated. ECDC has produced a significant library of scientific and technical content useful for experts around Europe, and improving the awareness and availability of this content will be a critical task.

The recommendation to make ECDC's products of more direct value to decision makers affects all levels of the Centre, and communication has a particular role in delivering reusable and impactful outputs to policymakers and other target audiences. One example is the co-creation of material for the European Antibiotic Awareness Day (EAAD) where ECDC provides template materials for adaptation or reuse for several target audiences. While some public health organisations use these templates, some prefer to participate with their own materials and share them on ECDC's EAAD platform, which was established in 2008. For other communication purposes, ECDC aims to develop new formats suited for a mix of target audiences, without compromising the scientific quality or national responsibilities. Development of new outputs and evolution of existing ones will be a gradual process for which feedback is vital; this should result in new formats and products in the years up to 2020.

ECDC recently initiated a dedicated project for communication support in order to increase vaccines coverage. This will include a number of ECDC-led activities to foster the sharing of best practices and joint activities between the EU/EEA countries. The immunisation project will be complemented in cooperation with WHO/Europe and support the European Immunisation Week (EIW) campaign as well as the online 'Immunize Europe Forum'.

2. The reputation of ECDC will be consolidated as an independent, transparent agency that produces and disseminates high-quality scientific content [strategic objectives 1 and 2].

In order to consolidate ECDC's reputation as a source of high-quality scientific content, the visibility of ECDC's scientific content among public health experts and policymakers will be increased for all valuable content produced by ECDC experts.

ECDC will continue its strong corporate branding, dubbed 'One ECDC', that conveys its corporate identity and apply it consistently to all its communication activities. Associated sub-brands will be limited and used only for certain topics and events, for example ESCAIDE, the annual scientific conference on applied infectious disease epidemiology, the independent scientific journal *Eurosurveillance*, and the ECDC Fellowship Programme.

The Director and Chief Scientist, supported by the Heads of Disease Programmes and the Heads of Public Health Functions, are the key corporate figureheads that will reinforce ECDC messages and the Centre's public image.

ECDC will define clear rules for engaging in joint and supportive activities with the Centre's stakeholders and partners, as defined by a newly developed stakeholder strategy. The rules outlined in the new strategy will respect the Centre's independence and strengthen its scientific reputation.

2.2.6 Disease Programmes

By the end of 2021, the following objectives will be achieved:

1. Consolidation of the disease networks (concerns all Disease Programmes) [all strategic objectives].

The external disease surveillance networks were already operative before the foundation of ECDC. Some included a laboratory component, depending on the nature of the disease. Progress in infectious disease control depends on effective prevention and control programmes that are informed by sound surveillance data. These data are part of the scientific and technical support that needs to be provided to the European Commission and the EU Member States. Due to budgetary constraints, some Member States had to downsize their investment in disease prevention, but the need for sound disease surveillance data remains. Some of these disease data can only be gathered if the functions of the surveillance networks are expanded. For Member States that cannot expand their surveillance, ECDC will aim to create working groups or task forces within the networks to discuss best practices and share successful initiatives in the area of prevention and control, as already done in some Member States. This approach will be outlined in a new version of the ECDC strategy paper on disease networks. The new strategy will improve the consistency of the networks, clarify their goals, and focus on their cost efficiency. A draft version has already been disseminated for consultation to the ECDC National Coordinators of Competent Bodies; feedback will be coordinated by the Disease Programme Section of ECDC. In addition, a systematic evaluation of the Disease Programmes, following a common protocol, was started in 2017 and will come to an end in 2021. The result of these evaluations will also contribute to consolidate the work of the Disease Programmes.

2. Support provided to the European Commission and Member States to better prevent and control antimicrobial resistance (AMR) and healthcare-associated infections (HAIs) (concerns ARHAI and FWD programmes) [strategic objective 2].

The external evaluation of the networks for surveillance of AMR (EARS-Net) and HAIs (HAI-Net) will have resulted in changes that will lead to improved country participation, representativeness of country data, geographical coverage, and integration of molecular typing data. EU indicators will be integrated into the surveillance of antimicrobial resistance (AMR) in bacteria from humans and in the surveillance of antimicrobial consumption in humans; reporting will be carried out by ECDC. ECDC will also contribute to the work and reporting of AMR and antimicrobial consumption data at a global level, i.e. to WHO. Remote access to country data on HAIs will have been tested and be available for use by Member States, as a means to preserve the confidentiality of reporting hospitals. Finally, ECDC will have proposed, as part of HAI-Net, targeted prevention and control measures that Member States and hospitals can choose to implement in addition to HAI surveillance.

The results of, and experiences from, ECDC's point prevalence surveys (PPS) of healthcare-associated infections (HAIs), including antimicrobial resistance and antimicrobial use in 2016–2017, will be used to launch a third PPS in European acute care hospitals; a fourth PPS will be prepared for European long-term care facilities. Both will include structure and process indicators that will help measure progress towards improved infection prevention, infection control and antimicrobial stewardship in acute care hospitals and long-term care facilities.

ECDC will have made contributions to the implementation of the second EU Action Plan on AMR and the Joint Action on AMR (and HAIs), to the implementation of WHO activities under the Global Action Plan on AMR, and to bilateral and international collaborations such as the Transatlantic Task Force on Antimicrobial Resistance (TATFAR), the Global Health Security Agenda (GHSA) and the Northern Dimension Partnership on Public Health and Social Well-being (NDPHS), thus contributing to the success of these initiatives. Finally, ECDC will have completed a cycle of country visits, with each Member State having been visited at least once, and upon invitation, having discussed AMR issues in human medicine.

3. Support will be provided to the European Commission and Member States to improve vaccination coverage and address vaccination hesitancy (concerns VPD, IRV, HSH programmes) [strategic objective 2].

A theme shared by a number of disease programmes is vaccination hesitancy and insufficient vaccination coverage. Vaccine hesitancy is defined as 'a behaviour, influenced by a number of factors, including issues of confidence (level of trust in vaccine or provider), complacency (no perceived need for a vaccine, no recognition of the value of the vaccine), and convenience (access).' Vaccination is an important area of policy attention of the European Commission. ECDC has been providing expertise in this area since its founding and is ready to provide technical support as needed. ECDC will continue to produce scientific data and communication tools to address vaccination scepticism and contribute to the strengthening of immunisation programmes in the EU Member States.

4. Support will be provided to the European Commission and Member States to strengthen immunisation programmes in EU (concerns VPD and IRV programmes) [strategic objective 2].

ECDC will continue to strengthen vaccination impact monitoring in the EU/EEA and will continue building and piloting alternative systems for the surveillance of certain diseases, with a special focus on sentinel surveillance structures. Examples include sentinel surveillance of invasive pneumococcal disease, pertussis and influenza to measure vaccination impact and effectiveness. Such sentinel approaches will also be piloted in other areas. ECDC

will provide technical guidance and support with country missions to those countries that want to set up, improve, and harmonise electronic vaccination registries.

ECDC will further develop and establish systems for Member States and the EU/EEA as a whole in order to provide an evidence base for policy making. This will include platforms for the exchange of evidence for policy making. For example, the VPD programme will be working with Member States, the European Commission and WHO/Europe to establish a platform for jointly coordinating literature reviews that inform national vaccination programme guidelines and policies. Such activities will be developed in close alignment with the future vaccination policy of the Commission and in line with the WHO European Vaccine Action Plan (EVAP) 2015–2020. In addition, an important area of work will be on life-course vaccination, where ECDC will aim to develop scientific evidence (e.g. on the burden of VPDs in adult age groups, new vaccines licensed for adults and the elderly, new vaccination strategies) and facilitate country exchange in order to support Member States that consider the development and implementation of immunisation programmes across different age groups.

Furthermore, mathematical modelling studies may be used in the coming years to estimate the impact of decreasing vaccination coverage in the EU. In support of the European Commission, ECDC will also continue monitoring seasonal influenza vaccine coverage in risk groups in accordance with the targets set in the 2009 European Council recommendations for seasonal influenza vaccination.

5. Establishment of synergies in the development and implementation of policies and programmes for the prevention and control of HIV (including STIs), TB and viral hepatitis (concerns HSH and TB programmes) [strategic objective 2].

ECDC will continue to support the European Commission and Member States in the implementation and monitoring of policies and programmes to prevent and control tuberculosis, HIV, hepatitis and sexually transmitted infections, and will aim to strengthen the synergies between such programmes.

In particular, ECDC will provide technical and scientific support to the Member States to implement and, where appropriate, integrate policies. The Centre will support the European Commission in relevant monitoring and coordination activities. The overlap in vulnerable populations and prevention and control approaches that target these populations will require coordination across the ECDC Disease Programmes (HSH and TB). In addition, the recent commitment of the Commission to support Member States in achieving the Strategic Development Goals as well their other global and regional action plan targets will require ECDC's input and support to ensure efficient and accurate monitoring of the progress.

6. Strengthened surveillance of influenza and reviews of pandemic preparedness in EU Member States (concerns IRV programme) [strategic objective 2].

The evaluations of the response to the 2009 pandemic highlighted the need to develop severity assessment mechanisms for pandemic and seasonal influenza. WHO is piloting a mechanism for having a global and regional capacity for such assessments. Strengthening the surveillance of severe disease and influenza-related mortality is the most robust ways of doing this.

In 2010, ECDC, WHO/Europe and the EU Member States assessed the lessons learned following the influenza pandemic in regional workshops. Since 2010, about a third of the EU Member States have updated their pandemic preparedness plans based on the lessons learned. After the adoption of Decision 1082/2013/EU and first experiences with generic preparedness assessments, work on the integration of pandemic preparedness planning into the generic preparedness planning should be undertaken. EU Member States should share pandemic preparedness plans for review. Regional workshops to review and improve national pandemic preparedness plans will be organised.

7. Further development of the relationships with relevant national, EU-level and international stakeholders for enhanced surveillance and response to multi-country clusters and outbreaks of food- and waterborne diseases and enhanced preparedness for emerging and vector-borne diseases (concerns FWD and EVD programmes) [strategic objective 2].

A joint ECDC–EFSA molecular typing database will have been established and inevitably lead to increased detections of mixed multi-country microbiological clusters and outbreaks. This requires good collaboration across sectors to improve epidemiological investigations at national and EU levels, which in turn will lead to the timely implementation of targeted prevention and control measures. The standard operating procedures for multi-country and EU-level response to food- and waterborne clusters and outbreaks will be consolidated.

The surveillance of travel-associated cases of Legionnaires' disease carried out by the European Legionnaire's Disease Surveillance Network (ELDSNet) will continue. Since 60% of the clusters detected by ELDSNet would not have been detected without this European surveillance, this network is particularly important. The aim is to increase the number of contact points in non-EU countries that are also tourist destinations in order to be able to initiate preventive measures at the source location.

Next generation sequencing technology is developing at a rapid pace and is likely to be established in a substantial number of Member States by 2020. Based on an evaluation of molecular typing data for epidemiological surveillance in 2015, whole genome sequencing for listeriosis will be piloted. By 2020, EU surveillance will be able to use molecular characterisations of *Listeria monocytogenes*. This technology will be available for public health purposes in at least 15 Member States, assuming that it will have become cost efficient and demonstrated added public health value.

The monitoring of antimicrobial resistance in human *Salmonella* and *Campylobacter* isolates was revised in 2013–2015. Quantitative isolate-based reporting was introduced, and the use of EUCAST methods will be promoted further. By 2020, it is expected that 20 Member States will have the capacity and capability to report isolate-based quantitative resistance data to TESSy. This will improve the comparability of antimicrobial resistance data in all areas (public health, food, veterinary), resulting in more meaningful EFSA–ECDC summary reports on antimicrobial resistance in zoonotic and indicator bacteria from humans, animals, and food.

The current trend for variant Creutzfeldt-Jakob disease (vCJD) indicates that this form of CJD is decreasing. Taking into account the continuing occurrence of sporadic cases of CJD and the incubation period for vCJD, ECDC will review and revise, as appropriate, its surveillance strategy for these diseases.

For emerging and vector-borne diseases, activities should lead to strengthened surveillance reporting, with updates of relevant case definitions, the implementation of different approaches for Lyme borreliosis surveillance, and improved preparedness to face unexpected infectious threats. They will include strengthening laboratory capacity in the EU for early detection of emerging pathogens, multi-disciplinary collaborations between agencies and different networks to better understand and assess the risks linked to emerging and vector-borne diseases outside the EU. Beside human/animal and environmental surveillance implementation, activities will focus on validation of assessment tools with integrated analysis and geospatial infectious disease modelling for risk mapping, risk forecasting and orientation on control options.

ECDC will also support the Commission's priority on country-specific and cross-border knowledge to inform policies by providing surveillance data, data analysis (including trends), and scientific advice on specific communicable disease indicators. This work will mostly take the form of country profiles or contributions to the 'Health at a Glance' reports.

2.2.7 Management

General management

1. By 2021, a new long-term strategy will be in place for the period 2021–2027.

ECDC will have developed a new long-term strategy for the period 2021–2027. Work on the new strategy started in 2018 with internal consultations. Discussions with the stakeholders and the Management Board will take place during 2019. Adoption of the long-term strategy by the ECDC Management Board is foreseen for 2019.

2. By 2021, a management and enterprise architecture framework for the entire Centre will be implemented.

In order to ensure the coherence between ECDC's vision, strategy and day-to-day activities, ECDC will have adopted a strategic, integrated and structured approach for the whole organisation. The ultimate goal is to align the ECDC strategy with operational excellence and organisational behaviour, and to increase the effective and efficient use of resources to improve efficiency and performance. Key elements include the organisation's vision, the governance and monitoring models, policies, planning and execution processes (including skills, roles and responsibilities, information management and IT support). With a coherent set of principles, methods and models, synergies within the organisation can be developed, and economies of scale can be implemented.

Collaborations

1. By 2021, ECDC will have strengthened its capacity and role as the EU technical reference point on issues related to communicable diseases for international and multinational organisations as well as public health players involved in public and global health [strategic objective 1].

ECDC will continue to coordinate its international activities with the European Commission (e.g. DG SANTE, DG ECHO, DG NEAR and DG RTD) and other services (e.g. European External Action Service, CHAFAE¹⁵). Based on its technical mandate and the lessons learned from ECDC's support to the Ebola response in West Africa, ECDC will strengthen the EU response support in humanitarian crises through existing European Commission structures, e.g. the European Medical Corps.

The coordination of technical work with WHO/Europe will continue with regular technical coordination meetings. The ECDC Management Board will be informed about the joint work plans, which may be published on both websites. In the coming years, collaboration will be intensified in two areas: preparedness/IHR (International

¹⁵ Consumers, Health, Agriculture and Food Executive Agency

Health Regulations) core capacities and work with the EU enlargement countries. In both areas, strengthened collaboration will benefit the countries concerned.

2. By 2021, ECDC will have intensified its collaboration with other EU agencies and bodies [cross-cutting strategic objective]

The existing collaboration agreements with EMA, EFSA, and EMCDDA¹⁶ will be strengthened. A more strategic liaison will be done by annual meetings at Director's level and increased synergies will be explored. Furthermore, ECDC will investigate the potential of intensifying the collaboration with agencies where contacts were limited to special occasions (e.g. EEA, FRONTEX, FRA¹⁷).

As an Agency funded from the EU budget, ECDC is subject to scrutiny by the European Parliament in the context of the EU budgetary process. As stated in the Centre's Founding Regulation (Article 7), the Parliament can request scientific opinions from ECDC, and ECDC's Director appears before Parliamentary committees when this is requested.

ECDC has established a positive and sustained working relationship with the European Parliament Committee on the Environment, Public Health and Food Safety (ENVI) and has an important annual dialogue with the Parliament's Budgetary Control Committee. Maintaining and further developing contacts with the European Parliament will continue to be a key priority for ECDC.

3. By 2021, ECDC will have developed credible collaboration with its key stakeholders [cross-cutting strategic objective 8].

The efficiency of existing cooperation will be improved and strengthened with the relevant stakeholders. Cooperation with ECDC stakeholders will be improved by further developing the CRM system, a central repository of information about ECDC's internal and external stakeholders, keeping track of stakeholder activities and communication, and streamlining the meetings management process.

Independence policy

1. By 2021, electronic support tools and training at ECDC will have assured a solid implementation of the regularly updated Independence Policy [strategic objective 1].

The Independence Policy, in place since 2013, was revised in 2016. The revision addressed a number of issues that needed clarification in order to allow a decentralised implementation of the policy across the different units and activities of ECDC. The electronic submission of declarations of interest was established. Further development of the system is key to reducing the amount of errors made, facilitate the publication of the submitted declarations of interest and enable faster and more rigorous checks for conflicts of interests as well as checks on veracity. Experiences from other agencies show that an Independence Policy needs constant adjustment and refinement, which will be taken into account by the flexibility of the electronic submission system and repeated training courses for those in charge of applying the policy. In addition, further internal guidelines will be developed.

Resource management

By the end of 2021, the following objectives will be achieved:

1. Results and EU added value [cross-cutting strategic objective]

ECDC will have maintained the high level of confidence and reliability of its accounts and the underlying transactions, maintained its high level of budget execution, kept its low vacancy rate, and maintained compliance with rules and regulations that apply to ECDC as a publicly funded independent agency of the European Union.

2. Continuous improvement, efficiency and effectiveness [cross-cutting strategic objective]

ECDC has aimed towards a lean and paperless organisation. All areas of resource management have been scrutinised for simplification, focusing on effective support to the Centre's operations in an efficient and cost-conscious way. ECDC has further enhanced its internal performance and monitoring. This relies on highly structured, efficient, and well-aligned internal procedures and processes for administration and operations, with clearly defined roles and electronic workflows that empower ECDC staff. This is supported by content and knowledge management, governed by a consistent set of information policies that ensure transparency, consistency and interoperability.

3. Staff resilience and well-being [cross-cutting strategic objective]

¹⁶ European Medicines Agency (EMA), European Food Safety Authority (EFSA), European Monitoring Centre for Drugs and Drug Addiction (EMCDDA)

¹⁷ European Environment Agency (EEA), European Border and Coast Guard Agency (FRONTEX), European Fundamental Rights Agency (FRA)

ECDC will have made sure it has the relevant competences to address public health challenges. The Centre will have further strengthened its ability to adapt to evolving EU challenges and priorities, including the Brexit. This will allow the Centre to better support and complement the European Commission and the Member States. ECDC will have made the most effective use of its specific knowledge and staff skills. It will have its resources assigned to the most value-added activities, while remaining an attractive place to work.

4. Crisis management and business continuity [cross-cutting strategic objective]

ECDC will have explored new ways of working and collaborating; it is assumed that Centre's new headquarters will positively influence corporate culture and improve corporate and social responsibility. ECDC will have improved site security as well as the ability to manage emergency situations. A number of measures will ensure the continuity of operation at all times.

Information and communication technologies

By the end of 2021, the following objectives will be achieved:

1. Implemented IT strategy management framework [cross-cutting strategic objective].

The IT strategy adopted in 2017 covers five areas (IT quality management, IT security, technology standards, data cloud, and functional software architecture). The IT strategy describes all objectives and goals for 2020 and lists key initiatives to achieve these goals.

2. By 2021, the IT Target Operating Model will be fully implemented, including the sourcing model [cross-cutting strategic objective].

Building on earlier efforts to minimise IT product purchases, reduce application development and limit reliance on on-site IT consultancy, ECDC will have adopted a model of sourcing for IT services based on off-site provision of infrastructure and application services.

3. ECDC will identify, assess, pilot, and implement new IT technologies in the field of communicable disease prevention and control [strategic objective 9].

New technologies will have been identified, assessed and implemented in the Centre to support ECDC's core functions.

4. ECDC will implement a culture of continuous improvement in its IT activities [cross-cutting strategic objective].

ECDC introduced a new ICT general governance in 2013, added process maturity and continuous quality improvement in 2013–2014, and fully established enterprise architecture in 2015. Evaluations and audits from different sources requested additional improvements, which will be implemented over time. Yearly evaluations of the Continuous Improvement plans will be performed.

In addition, the ICT Unit will have ensured the delivery and operation of all IT solutions that support the Centre's mission. This includes operating IT infrastructure, maintaining existing applications, and delivering new solutions like the planned core surveillance systems and EWRS.

3. Human and financial resource outlook 2019–2021

3.1. Overview of the past and current situation

- Staff population overview 2017. See Annex 3, Table 1
- Expenditures for N-1. See Annex 2, Table 1

3.2. Resource programming 2019–2021

3.2.1. Financial resources

Justification

- Revenue: detailed data provided in Annex 2, Table 2
- Expenditures: detailed data provided in Annex 2, Table 1

Title 1. The budget 2019 is forecast to accommodate the salaries and salary-related costs of the implemented establishment plan and the Centre's contract staff. As per the required reduction of posts in the establishment plan, the Centre has implemented a 10% reduction of posts. A change in the exchange rate for the Swedish krona impacted the weighting factor for Sweden in 2017, which actually increased rather than decreased as originally expected. This will have an impact on the Title 1 expenditure in 2018. The budget for salary-related expenditures has been estimated considering the 2018 implementation. As we have seen in 2017, the impact of the weighting factor on the budget is an unpredictable macroeconomic part of ECDC's budget planning and execution. This is due to the fact that the correction coefficient applied to the salaries in Sweden is driven, to a large extent, by the fluctuations of the Swedish krona.

Title 2. In 2019, the total budget of Title 2 decreases by 10.3% due to the fact that no further major investments for the building are expected, because ECDC moved to new premises in early 2018.

Title 3. The amount of Title 3 provided in Annex 2, Table 1, will increase by 11.4% compared with 2018. The 2019 budget is forecast to reach EUR 20 460 000, and the 2020 budget for Title 3 is forecast at EUR 21 278 000. This increase originates in the increased EU contribution for ECDC, as determined by the Commission Communication COM(2013) 519 on human and financial resources for decentralised agencies 2014–2020. The Title 3 budget for 2021 is kept at the same level as in 2020.

Title 3 will be used to implement ECDC work programme activities through external procurements, grants and meetings.

Budget outturn and cancellation of appropriations

Information is provided in Table 3, including a short description and justification. See Annex.

3.2.2 Human resources

Overview of the situation over the years 2018–2020.

New tasks

The Centre has not been entrusted with any new tasks requiring the extension of the agency mandate.

Growth of existing tasks

A number of tasks were added and more are expected to be added due to ECDC's current mandate with regard to implementation of Decision No 1082/2013/EU. ECDC's support to unusual outbreaks may also lead to an increased work load.

Efficiency gains

ECDC continues its efforts towards delivering further efficiency gains, with the integration of continuous improvement as part of its Quality Management system. The introduction of lean methodologies and, jointly with the European Commission, the automation of a set of administrative functions, have helped the Centre to make significant efficiency gains, promote a paperless environment and reinforce compliance. For example, under the e-Administration initiative, 23 contractors have been sending electronic invoices to ECDC or are in the process of doing so, which significantly reduces the processing and payment time. ECDC delivered significant improvements by reducing the number of non-value adding activities and meetings and will continue to do so. In 2019, ECDC will focus on improving its planning process. The ECDC common project management methodology is now approved and allows the Centre to further optimise resource allocation. The move to the new premises will give us the

opportunity to achieve significant efficiency gains and to improve the interactions between Units and external stakeholders. Finally, the implementation of Activity Based Budgeting allows the Centre to better manage the allocation of its resources.

Negative priorities/decrease of existing tasks

The Centre's Strategic Multi-Annual Plan 2014–2020 states that following the post cuts, the portfolio of activities may need to be reduced; 50 % of the reduced temporary agent posts are in the area of administration and support.

Redeployment of resources in view of budgetary constraints

While the Centre acknowledges the request by the European Commission and the budgetary authorities to reduce staff by 5% (on head counts) over five years and an additional request for a 5% staff reduction for the agency re-deployment pool, the workload of the Centre has actually increased (not least in view of Decision 1082/2013/EU as well as an increase in activities in recent years, particularly in the area of VPD). The Centre's staff surveys show that staff feel overwhelmed by their workload. The Centre started the implementation of the post reduction by cutting two posts in the establishment plan of 2013 (1 AD, 1 AST), four posts in the establishment table of 2014 (2 AD and 2 AST), four posts in the establishment table of 2015 (2 AD and 2 AST), four posts in the establishment plan 2016 (2 AD and 2 AST) and four posts in the establishment plan 2017 (2 AD and 2 AST). The last two post reductions are effective in the establishment plan 2018 (1 AD and 1 AST). Thus, the Centre has complied with the required staff reduction as requested by the European Commission.

Since the Centre has a relatively young work force, it was difficult to plan for reduction considering retirement.

The Centre has been using two methods for reducing posts in the establishment. The first method is to review all upcoming vacancies and refrain from filling some of them. The Centre has a turnover of approximately 6–8% per year, and certain vacancies arising from this were considered possible to cut. The other method used was to not renew a contract when it came up for renewal if it was no longer required.

To ensure the continuity of business-critical activities, the Centre decided to cut posts in functions that can be distributed among other staff with the same expertise, also keeping in mind the increase of weekly working hours which entered into force in 2014. However, the Centre will set priorities in its work plan and reduce some activities if the resources do not match the tasks given to the Centre. The Centre will decide on cutting activities as and when required. Additional outsourcing may be considered as a possibility.

Conclusion on evolution of resources compared to the European Commission Communication 2014–2020

The Centre concludes that the required staff reductions were achieved despite an increase in existing tasks. However, it needs to be reiterated that prioritisation among activities is critical, otherwise the Centre runs a risk to overburden its work force and increase stress levels among its staff.

4. Work programming, 2019 priorities

Summary

The work programme 2019 is based on ECDC's strategic work areas. It provides evidence for decision-making, measures for strengthening public health systems, support for the response to threats, and multi-annual objectives.

Surveillance and epidemic intelligence

In 2019, ECDC will continue to have its epidemiological surveillance systems evaluated by an external provider. It will continue implementing the Surveillance Systems Reengineering roadmap to reinforce its technical surveillance platforms and processes. ECDC will also support Member States eager to automate the transfer of their surveillance data.

Scientific support

ECDC will improve its prioritisation tools and repository for scientific advice. It will further improve the quality of its scientific outputs. The Centre will hold the annual ESCAIDE conference in November. ECDC engagement with EU funders and ongoing research projects will be further explored. Training courses on evidence-based practice and decision-making will be organised. With regard to microbiology, ECDC will continue supporting and monitoring the capacities and capabilities for essential microbiology services in Member States for surveillance, prevention and control of infectious diseases (EULabCap project). Pilot studies will be performed as part of implementing the molecular typing strategic roadmap.

Preparedness and response

ECDC will continue to support the Commission and the Member States in monitoring the implementation of Decision 1082/2013/EU in the area of preparedness. The Centre will support country preparedness capacities and capabilities through technical guidance, simulation exercises, tools, and technical support for communicable diseases to the Health Security Committee. The ECDC Emergency Operation Centre will be further strengthened, the Public Health Event plan updated, and mobilisation mechanisms for public health response teams developed further. ECDC will continue to provide rapid risk assessments to the Member States and the Commission and develop new tools for the rapid investigation and analysis of multi-country outbreaks. Rapid risk assessments will be developed as 'live' documents with quick and easy access to new data and updated information.

ECDC will continue supporting the Member States by providing scientific advice on the risk and prevention of communicable disease transmission through transfusion and transplantation, developing ad hoc expert opinions on open questions related to the safety of substances of human origin (SoHO), including regular briefing at the meetings of the National Competent Authorities for SoHO. The Centre will also assist the Member States in developing preparedness plans for the prevention of emerging infections transmitted through transfusion and transplantation. In collaboration with the Commission, the Centre will continue to assess the value of introducing new regulations (e.g. on the prevention of sexually transmitted infections through SoHO). ECDC will also conduct biannual evaluations of national policies on testing and screening of donated blood, tissues and cells.

Training and capacity building, international relations

The ECDC Fellowship Programme (EPIET and EUPHEM) and its underlying competencies and curricula will be further developed based on the outcome of an external evaluation in 2018–2019. The Continuous Professional Development Programme (CPDP) will meet the training needs of the ECDC/CCB networks with focus on competencies needed for efficient work on cross-border health threats. Additional courses, notably e-learning modules, will be added gradually. A new mechanism for supporting countries based on expression of needs will be fully implemented, following experiences during a pilot phase in 2017.

In terms of international relations and cooperation with EU enlargement and ENP partner countries, ECDC will monitor and deliver regular progress reports on the participation of these countries in ECDC activities and their use of ECDC tools in accordance with EU policy priorities and the ECDC International Relations Policy. ECDC will conduct an assessment of one EU enlargement country as requested by the European Commission. With external financial support from the European Commission (DG NEAR), ECDC will implement pre-accession technical support activities through a grant (ECDC-IPA5/2017/386-267) during 2017–2019. ECDC will continue its cooperation with ENP partner countries to bring these countries closer to EU standards and foster health security by strengthening country capacities to respond effectively to health threats related to communicable diseases, provided that EU funding is available. ECDC will further enhance its cooperation with major global centres for disease prevention and control as well as with WHO.

Communication

ECDC will continue to publish timely scientific and technical content to its target audiences through a variety of communication channels. Technical support will be provided to national health communication campaigns, with focus on antimicrobial resistance (European Antibiotic Awareness Day) and vaccinations. Transition to a new content management technology is foreseen, significantly improving the searchability and navigation structure of ECDC's website. Further efforts will be made to increase the visibility of the Centre to its key target audiences with a focus on the added value of our work.

The journal *Eurosurveillance* will continue to be widely known by public health experts/scientists and policymakers and be recognised as a source of high-quality data, open-access information that can be used for (timely) public health action. The journal will continue to support capacity building activities in the field of communicable diseases and publication ethics. Social media and scientific gatherings will be used to support dissemination of content. Content and educational activities will support the development of critical appraisal skills and awareness of research integrity, in particular ethical issues related to publication. *Eurosurveillance* continues to rank among the leading journals in its field.

Disease Programmes

Antimicrobial Resistance and Healthcare-associated Infections – ARHAI

ECDC will further develop key outputs on antimicrobial resistance (AMR) and healthcare-associated infections (HAIs). The data from the surveillance networks will be available on the ECDC Surveillance Atlas of Infectious Diseases, and the role of ECDC as a hub of harmonised European surveillance systems for AMR and HAIs, including molecular surveillance, will be further consolidated. ECDC will support the Commission in the implementation of the European One Health Action Plan against AMR with dedicated initiatives to prevent and control AMR and HAI. In addition, through collaboration with EFSA and EMA, more synergies will be developed with the veterinary sector as part of the 'One Health' approach. ECDC will collaborate closely with Member States on their Joint Action on AMR and HAIs. Finally, ECDC will continue contributing to international initiatives such as the Transatlantic Task Force of AMR (TATFAR).

Emerging and Vector-borne Diseases – EVD

ECDC will support country preparedness and response in the field of emerging and vector-borne diseases by providing scientific advice on emerging and vector-borne diseases, conducting risks assessments and developing decision-making tools for control strategies. ECDC will further strengthen surveillance through the implementation of notifiable vector-borne diseases, the monitoring of vector distribution and the timely reporting of emerging and vector-borne diseases that are prone to epidemics. The programme – in close collaboration with other EU initiatives – will work on increasing laboratory capacity for the early detection and surveillance of EVD through an outsourced laboratory network. The programme will promote multidisciplinary networking and partnerships with international stakeholders to improve intersectoral collaboration and capacity and capability building in the Member States.

Food and Waterborne Diseases – FWD

ECDC will continue to deliver fit-for-purpose disease surveillance, produce disease and surveillance reports, conduct external quality assessments for laboratory services, and hold network meetings. An analytical and epidemiological validation of data on whole genome sequencing (WGS) for salmonellosis and STEC/VTEC surveillance at the EU level is foreseen, similar to previous work on listeriosis. Multi-centre studies will be initiated on the reasons for persistence of some major clonal strains of *Listeria monocytogenes* and *Salmonella* in the food chain. These strains lead to recurrent human infections that are preventable. The scenarios on the integration of WGS into the joint ECDC–EFSA molecular typing activities will be finalised by April 2019. Close collaboration with PulseNet International is foreseen to ensure linkage to the global surveillance of FWD. Surveillance of human transmissible spongiform encephalopathies will be updated in accordance with the agreed strategy. International and cross-sectoral collaboration will be strengthened under the 'One Health' principle.

HIV, Sexually Transmitted Infections and Viral Hepatitis – HSH

ECDC will continue to improve disease surveillance, adapt the programme monitoring, and support countries to step up their efforts to reach to the new Sustainable Development Goals. An emphasis on the production of high-quality reports and scientific articles will continue, as will the organisation of network meetings and expert groups to discuss specific projects such as the EU viral hepatitis seroprevalence survey. International collaboration will be strengthened, in particular with WHO, EMCDDA and specific clinical networks and learned societies relevant to these diseases. Member States will be supported through country visits.

Influenza and other Respiratory Viruses – IRV

ECDC will continue to provide output on influenza surveillance and produce weekly surveillance reports during influenza season. Other publications include rapid risk assessments and scientific advice in the area of respiratory pathogens. Timely vaccine effectiveness and coverage estimates will be made available to stakeholders.

Tuberculosis – TB

ECDC will strengthen tuberculosis (TB) surveillance at the EU and national levels to reach adequate coverage and completeness, strengthen TB laboratory services for management of TB, and TB prevention and control – especially in high-burden Member States. ECDC will support the achievement of the Sustainable Development Goals in the field of TB. ECDC will continue to provide scientific advice on TB prevention and control in the EU and technical support to the Commission for the development of an EU policy document.

Vaccine Preventable Diseases – VPD

ECDC will develop with its partners and stakeholders – and in close alignment with the future vaccination policy of the European Commission and WHO Action Plans – a structure to support Member States in sharing their evidence base for vaccine programmes. ECDC will continue to assess and provide advice on addressing vaccine hesitancy and vaccine shortage, provide technical guidance to set up electronic registries in Member States, and establish structure to monitor the impact and effectiveness of priority vaccines.

Management

General Management

The third independent external evaluation of ECDC, launched in 2018, will be completed and the Management Board will issue recommendations. Processes will be further simplified, with roles and responsibilities clearly defined; an organisation-wide external evaluation framework will be added to the business architecture (processes and organisation), information architecture (data and content) and technology architecture (IT systems and services).

Collaboration and cooperation

ECDC will continue to ensure continuous and smooth relationships with the European Commission, the EU Parliament and other EU agencies. Relationships will be further consolidated with the Member States through the Competent Bodies and our host country, Sweden.

Resource management

ECDC will continue to ensure effective and compliant operational support to its activities. It will continue to address the needs to further strengthen its operations and respond to the changing environment in which it operates, in the most efficient way. The main objective is to address challenges and propose best practices to solve them. This will support further efficiency gains, effectiveness improvements, transparency, consistency, and will reduce the overall workload.

ICT

All IT applications and infrastructures will be maintained, competently hosted and secured. New systems will be developed to support Work Programme commitments. The implementation of the IT Strategy Management Framework will continue. The continuous improvement plan for 2019 will be implemented. Framework contracts supporting the externalisation of IT activities will be in place. A technology watch report will be published, and new IT technologies will be piloted and assessed.

N.B. Key outputs that might be considered for de-prioritisation in the case of an emergency (public health emergency) or budget reductions are marked with an asterisk * in the lists below.

4.1. Surveillance and epidemic intelligence

4.1.1. Surveillance

Surveillance is one of the basic tools for preventing and controlling infectious diseases. Good-quality, consistent and comparable surveillance data enable public health professionals to monitor the spread of infectious diseases and assess the effectiveness of interventions to prevent them. Supporting EU-level surveillance is one of the core tasks given to ECDC in its Founding Regulation and reiterated in Decision 1082/2013/EU.

ECDC's overarching priorities are to add more value to the data it gathers by making them available in user-friendly formats as soon as possible, to decrease the administrative burden on data providers in the Member States, and to take advantage of the possibilities offered by molecular and information technologies. In 2019, ECDC will start playing a proactive role in the field of exploiting eHealth for infectious disease surveillance. This will be achieved by setting up an eHealth taskforce and producing an eHealth strategy for the Centre. By the end of 2019, ECDC should have acquired a deeper understanding of the feasibility of using existing health information systems for surveillance purposes. Furthermore, ECDC will continue to have its surveillance systems evaluated, reengineered its surveillance platforms and processes, and further developed molecular surveillance while refining data analysis and dissemination. ECDC will also continue to provide input to possible revisions of EU case definitions by the European Commission and develop EU standards for surveillance.

Event-based and indicator-based surveillance data will be collected in a more systematic and complementary way that will bring surveillance and epidemic intelligence closer together.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective
Objective 2019 – 1	Complete the optimisation of the technical surveillance platforms and processes as identified through the 'Surveillance Systems Reengineering' (SSR) project in 2015–2017.
Key outputs 2019	Improved technical surveillance platforms, processes, and outputs.
Expected results	A newly developed EU/EEA surveillance system automates processes and integrates different types of data, offering a modern, user-friendly platform for data reporting, analysis, visualisation and dissemination.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 2	Evaluate EU/EEA-level surveillance systems as per project plan.
Key outputs 2019	Surveillance system evaluation reports as per project plan.
Expected results	Surveillance system weaknesses corrected.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 3	Use the EU/EEA surveillance system evaluations to define EU/EEA and national minimum surveillance standards and their monitoring indicators.
Key outputs 2019	EU/EEA surveillance standards and monitoring indicators for surveillance systems evaluated in 2017/18.
Expected results	Surveillance system improved over time.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 4	Publish in-depth surveillance data analyses in peer-reviewed open access scientific journals.
Key outputs 2019	Peer-reviewed scientific articles, analysing surveillance data in depth.
Expected results	Deeper EU/EEA surveillance data analysis and interpretation and wider and more effective dissemination of findings.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 5	Consolidate and further develop molecular surveillance at EU/EEA level as per revised ECDC strategy and roadmap.
Key outputs 2019	Molecular surveillance data analysis integrated in surveillance outputs.
Expected results	Molecular surveillance data enrich traditional surveillance and provide additional information for action.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 6	Pilot new surveillance indicators for antimicrobial resistance (AMR) and an outbreak alert threshold for monthly reported salmonella serotypes.
Key outputs 2019	Results included in relevant surveillance outputs.
Expected results	Improved steering of AMR prevention and control and detection of outbreaks of salmonellosis.

ECDC cross-cutting objectives	Cross-cutting objective 9
Objective 2019 – 7	Assess the feasibility and added value of using existing electronic health data in Member States for EU surveillance.
Key outputs 2019	ECDC taskforce on eHealth established. Draft ECDC eHealth strategy ready for first round of consultation with AF and relevant NFPs.
Expected results	Availability of timely and high-quality information for priority diseases enhances the value of EU level surveillance for Member States while diminishing the demand for routine notification data collections.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
1	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Ensure the timely processing and availability of surveillance data	Time from the closure of Member States data collection to the publication of the results in the Surveillance Atlas	n/a	3 months	Surveillance systems data monitoring
2	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Evaluate EU/EEA-level surveillance systems as per EPHESUS project plan and define EU/EEA and national minimum surveillance standards and monitoring indicators	<ul style="list-style-type: none"> Number of surveillance systems evaluated (as per milestones' in EPHESUS project plan) Surveillance standards and monitoring indicators for each enhanced surveillance system are published on ECDC website within one year after sharing the evaluation report with the relevant network. 	3 surveillance systems evaluated n/a	11 surveillance systems evaluated. Surveillance standards and monitoring indicators published on ECDC website for HIV and AMR	Monitoring of milestones and quality indicators
3	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Publish in-depth surveillance data analyses in peer-reviewed scientific journals	Manuscripts accepted for publication in peer-reviewed scientific journals with open access	16	≥ 5 manuscripts with in-depth surveillance data analyses accepted for publication in peer-reviewed scientific journals with open access	Acceptance letters from journals received by first authors
4	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Consolidate and further develop molecular surveillance at EU/EEA level	Completion of milestones as per revised molecular surveillance roadmap	WGS-based surveillance operational for: Antibiotic resistant <i>N. gonorrhoeae</i>	WGS-based surveillance operational for: Listeria, Carbapenemase producing <i>Enterobacteriaceae</i> , Invasive <i>N. meningitidis</i> , antibiotic-resistant <i>N. gonorrhoeae</i>	Monitoring of milestones against roadmap

4.1.2 Epidemic intelligence

Monitoring and assessing threats to public health in Europe from infectious diseases are core tasks for ECDC, as is providing technical support to the EU-level response to such threats. The European Commission and Member States have come to rely on the Centre's rapid risk assessments and technical support when faced with serious multi-country infectious disease threats. This has been seen during numerous outbreaks in recent years, most recently with the outbreak of Ebola virus disease in West Africa in 2014-2015, the large outbreak of *Salmonella* Enteritidis originating from egg farms in Poland in 2016 or the multiple introductions and local transmissions of malaria in four different Member States in 2017.

ECDC's partners in the European Commission and Member States rely on its epidemic intelligence and response support activities. These are core services that the Centre has been providing since it became operational: many of the activities and outputs planned for 2018 can therefore be seen as continuation of services provided in previous years. Nonetheless, ECDC expects the EU level cooperation against multi-country infectious disease outbreaks to further intensify over the coming years as a result of Decision 1082/2013/EU. ECDC will hence be developing a range of new tools to support more rapid investigation and analysis of multi-country outbreaks. These will include among others:

- an online outbreak investigation questionnaire tool that can simultaneously create a questionnaire in several languages and enable joint analysis of the results gathered,
- a tool to enable rapid creation and real time updating of line listings/epidemic curves for multi-country outbreaks and epidemic contexts, and
- a new GIS tool for the investigation of community Legionnaires' disease outbreaks.

The threats of unknown origin will continue to be monitored and assessed whenever they represent a potential public health risk. Considering the diversity and the nature of those threats, they are addressed in cooperation with the EU and the international bodies with different fields and areas of expertise. While the origin of the threat remains unknown, ECDC will properly monitor the event with the available sources of information including social media and when possible apply epidemiological methods to try to clarify its origin and potential public health impact. A suitable all hazards approach will be considered.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 5
Objective 2019 – 1	Ensure timely and effective monitoring of potential threats from infectious diseases.
Key outputs 2019	Daily Round Table report and weekly Communicable Diseases Threat Report (CDTR).
Expected results	Serious cross-border health threats (Europe, global) timely detected and communicated to the Commission and Member States to allow for rapid action.

ECDC strategic objective	Strategic objective 5
Objective 2019 – 2	Ensure the proper coordination with the National Focal Points (NFP) of Member States.
Key outputs 2019	Annual meeting of the NFP for threat detection.
Expected results	Maintaining the proper communication and exchange with the NFP for threat detection in Member States.

ECDC strategic objective	Strategic objective 5
Objective 2019 – 3	Implement activities of the ECDC Epidemic Intelligence Strategy.
Key outputs 2019	In partnership with WHO: <ul style="list-style-type: none"> • Strategy for use of crowd sources (social media) for epidemic intelligence • Pilot of an external crowdsourcing analysis tool • Protocol designed and used to evaluate crowd-sourcing tools within the epidemic intelligence field.
Expected results	Improved epidemic intelligence capacity for threat detection in ECDC in 2019, with a potential impact for Europe and beyond when fully implemented.

ECDC strategic objective	Strategic objective 5
Objective 2019 – 4	Disseminate event surveillance activities in an annual summary of the threats detected during the year.
Key outputs 2019	Annual threat report produced in time, adhering to the quality standards of ECDC.
Expected results	Keep ECDC, Member States, the European Commission, and the main stakeholders informed about the main threats detected during the previous year.

ECDC strategic objective	Strategic objective 5
Objective 2019 – 5	Ensure timely and effective monitoring of health determinants through a determinants platform.
Key outputs 2019	Determinants platform established and providing data.
Expected results	Health determinants assessed as potential early warning signals for infectious disease threats and communicated as part of risk assessments to the Commission and Member States to allow for rapid action.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
6	Coordinate and support the rapid assessment of risks and the identification of options for response.	Provision of relevant, and timely updates on threats to the Member States and the European Commission.	Provision of regular epidemiological updates for threats under mid (1-6 months) and long-term monitoring (>6 months).	90%	Update provided for 100% of threats under mid-term (1–6 months) and long-term monitoring (>6 months)	CDTR, epidemiological updates available on ECDC website.

Total resources surveillance and epidemic intelligence:

Total FTEs for this activity: 28.45 FTEs

Total operational budget, Title 3: EUR 1 664 170

4.2. Scientific support

4.2.1 Scientific advice

One of ECDC's core functions is the provision of scientific advice that is of high quality and relevance for the EU and Member States. ECDC remains highly committed to scientific excellence, independence and transparency.

From 2019 onwards, policies and processes implemented over the last years will fully support the development of scientifically sound evidence and advice, ultimately increasing the trust of the public health community and the public, while maintaining confidence in the Centre's scientific integrity and independence.

The ECDC Scientific Advice Repository and Management System (SARMS) will incorporate all scientific requests and outputs and related scientific work produced by the Centre and allow proper and complete follow-up for management, administrative and auditing purposes, from the submission of a request to the formal clearance and dissemination. In addition, SARMS will function as a searchable repository.

ECDC aims to increase consistency, transparency and brand recognition of all its scientific outputs. The Centre wants to make it easier for users to identify ECDC scientific advice and understand the underlying evidence base.

ECDC will explore and develop opportunities for scientific collaborations and continued mutual learning and capacity building in cooperation with its stakeholders. To further strengthen collaboration within the public health community, ECDC will support sustainable and fruitful two-way communication with its established public health and disease networks and engage with other EU institutions responsible for risk assessment, policy and research, and EU networks such as EU-ANSA, AIRSAN and EMERGE. This collaborative and networking approach also includes international partners as well as research bodies working in the areas of infectious diseases epidemiology, prevention and control. These and future scientific collaborations will also support the identification of public health knowledge gaps, needs and areas within the Centre's remit that could benefit from ECDC scientific work and advice, thereby avoiding redundancies and duplication of efforts.

ECDC will continue to follow research and methodology developments on a global scale to ensure that its work stays relevant, scientifically sound and meets international standards.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019 – 1	Produce consistently high-quality scientific work and advice within agreed deadlines.
Key outputs 2019	High-quality ECDC scientific advice outputs published on the Centre's website and/or as open access publication in peer-review scientific journals (see sections on Disease Programmes). ECDC scientific advice in clearly defined formats, e.g. expert opinion, systematic review and public health guidance, using a structured format and providing sufficient information on rationale, applied methods, evidence base, analysis, as well as limitations and remaining uncertainties to allow informed decision-making at EU and Member State level.
Expected results	ECDC scientific advice produced, following the best scientific practice and evidence-based principles to increase consistency and transparency.

ECDC strategic objective	Strategic objectives 1, 2, 8 and 9
Objective 2019 – 2	Build strategic alliances to identify, prioritise and pursue public health research needs in order to create synergies and further improve ECDC scientific advice.
Key outputs 2019	Collaborative agreements with key partners (e.g. EU-ANSA, learned scientific societies).
Expected results	Create synergies to further improve scientific advice.

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019 – 3	Implement and assess processes for the development of scientific advice and other ECDC outputs with scientific content to enhance the Centre's performance and monitoring.
Key outputs 2019	Use the ECDC Scientific Advice Repository and Management System (SARMS) to provide a comprehensive overview of the Centre's scientific outputs, ensure compliance with ECDC policies and monitor responsiveness to external requests.
Expected results	Increased consistency and transparency of ECDC scientific work and advice, and processes. Increased time efficiency and better compliance with ECDC policies (e.g. ECDC independence policy; ECDC open access policy).

ECDC strategic objective	Strategic objectives 1, 2 and 3
Objective 2019 – 4	Strengthen knowledge and skills needed for evidence-based practice and decision-making in the area of communicable diseases epidemiology, prevention and control, supporting continuous professional development.
Key outputs 2019	Workshops in methods and tools for evidence-based practice and decision-making for ECDC staff and ECDC partners at EU and country level.
Expected results	Increased knowledge of the principles and application of methods and tools for evidence-based practice and decision-making within the communicable diseases and public health workforce in the Member States in order to improve advice and guidance.

ECDC strategic objective	Strategic objectives 2 and 4
Objective 2019 – 5	Organise the annual European Scientific Conference on Applied Infectious Disease Epidemiology (ESCAIDE) in cooperation with Member States, European Commission services (including SANTE, CHAFEA, JRC) and other EU agencies.
Key outputs 2019	2019 edition of ESCAIDE to be hosted in Stockholm, Sweden.
Expected results	Dissemination of scientific knowledge in the area of communicable disease epidemiology, prevention and control and complementary disciplines (e.g. health economics, mathematical modelling, new technologies).

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
7	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Ensure integrity of ECDC's scientific activities in relation to technical and scientific content, methods, and internal policies and processes. Ensure that the Centre's scientific activities are published, disseminated and easily accessible to all.	<ul style="list-style-type: none"> Proportion of ECDC scientific outputs processed through SARMS¹⁸, following the respective workflows and template Proportion of ongoing and completed ECDC scientific outputs, available on the ECDC website Proportion of ECDC peer-reviewed articles, published as gold standard open access¹⁹ in scientific journals Uptake of selected ECDC outputs by target audience in the Commission and Member States 	n/a n/a 76% n/a	At least 90% At least 90% of the ECDC scientific outputs planned At least 90% At least 70% of uptake	SARMS List of planned scientific outputs on the ECDC web portal. This excludes articles in peer-reviewed journals. ECDC library ECDC website statistics and surveys, dedicated meetings (e.g. AF); rating of ECDC publications on the web portal
8	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	Promote the Centre's scientific work through outreach to the scientific and public health communities.	<ul style="list-style-type: none"> Five-year impact factor²⁰ of ECDC peer-reviewed publications Average number of citations per publication²¹ Proportion of abstracts submission and participants from EU/EEA at ESCAIDE Rating evaluations of ESCAIDE as 'excellent' or 'good' Meeting with EU key partners in public health research and risk assessment 	7.91 26.31	> 3 > 15 in the 5 years following publication At least 70% > 75% of respondents At least one per year	ECDC library services ECDC library services ESCAIDE registrations abstract database and evaluation and work plan e.g. EU-ANSA, JRC etc

¹⁸ SARMS: ECDC Scientific Advice Repository and Management System

¹⁹ 'Gold standard' open access is defined in the 'Internal policy on open access publication of scientific content, including articles submitted to peer review journals ECDC/IP/105'. All publications, including articles published in peer-reviewed journals, arising from work produced or contracted by the Centre should be published as open access, with no embargo period before access is granted.

²⁰ The five-year impact factor for Y is calculated using a formula, where Y is year: impact factor (Y) = citations in Y to articles published in Y-5 to Y-1/Articles published in Y-5 to Y-1.

²¹ The five-year average citation per article is calculated based on Y-1 to Y-5, where Y is year.

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
9	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission	High responsiveness to requests by providing authoritative and reliable scientific opinions and evidence-based guidance to Member States, European Commission and Parliament	Proportion of requests answered within agreed deadlines: • European Parliament • European Commission • Member States • Others.	100% (59 requests)	At least 95% of requests answered within agreed deadlines	SARMS

4.2.2 Microbiology

In keeping with the EU Health Strategy, every Member State should have access to routine and emergency diagnostic and reference laboratory services to detect, identify, characterise and subtype human pathogens of public health significance. This is dependent on sufficient laboratory capability and capacity at clinical, national and supranational reference levels. ECDC will continue to support the Member States to foster capacity of the EU public health microbiology system, based on the monitoring and identification of gaps (EULabCap indicators) and the results of external quality assessments.

Decision 1082/2013/EU gives the European Commission and Member States a robust legal basis for cooperating in the fight against infectious diseases and other serious cross-border health threats. The European Commission is examining options for strengthening EU-level networking of reference laboratories in the area of human pathogens. In 2019, ECDC will continue to provide technical support and evidence-based analysis of needs from the EULabCap monitoring system to the European Commission, as it takes forward this initiative, taking into account the reference laboratory activities in place (part of the WHO networks and frameworks). ECDC will work closely with the Commission to coordinate the EU Joint Action on preparedness for serious cross-border threats to health, with the goal to ensure sufficient capacity in the network of European Reference Laboratories in order to apply new diagnostic methods and rapidly identify emerging and highly pathogenic agents.

Innovative molecular diagnostic tools and whole genome sequencing analysis are transforming diagnostic and typing approaches. There is a continuing need to critically assess their accuracy and public health usefulness. ECDC is developing guidance on these issues, together with Member State experts and Disease Networks. In addition, national reference laboratories need harmonised protocols and external quality assessment schemes for these new microbiological technologies to ensure the comparability of surveillance data. In 2019, the revised ECDC roadmap V3.0 for integration of molecular and genomic typing into EU-wide surveillance will guide operational implementation across disease-specific surveillance projects. ECDC will offer scientific guidance on the public health added value and provide solutions to integrate whole genome sequencing for pathogens under EU surveillance. The Centre will also support the Member States' access to urgent whole genome sequencing in response to cross-border outbreaks. This work will be performed – in close collaboration with EFSA – by upgrading the joint ECDC–EFSA molecular typing database for WGS-based typing data exchange on foodborne pathogens. ECDC will also pursue its partnership with academic leaders through advising on DG RTD projects, including the Horizon 2020 COMPARE project (rapid genome-based identification of pathogens). This work will foster an integrated perspective, based on close collaboration of microbiologists with clinicians, epidemiologists, veterinarians, in a One-Health approach.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 3
Objective 2019 – 1	Support the further strengthening and coordination of essential microbiology capabilities in Member States for surveillance, prevention and control of infectious diseases and antimicrobial resistance, informed by the EULabCap performance indicator monitoring.
Key outputs 2019	Disease-specific and generic laboratory capacity building activities, including EQA schemes.
Expected results	Improved country and EU-level laboratory capacities for surveillance, prevention and control of infectious diseases.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 2	Provide technical support to the European Commission on public health reference laboratory networks for human pathogens towards the objective that European Reference Laboratory networks have the capacity to develop new diagnostics and rapidly identify emerging and highly pathogenic agents.
Key outputs 2019	Technical support provided to the European Commission on public health reference laboratory networks.

ECDC strategic objective	Strategic objective 1
Expected results	Improved country and EU level laboratory capacities and efficiency of microbiology services achieved for surveillance, prevention and control of infectious diseases and preparedness against infectious threats.

ECDC strategic objective	Strategic objective 2
Objective 2019 – 3	Provide technical advice on public health microbiology methods and disseminate information to stakeholders and the public about the Centre's microbiology support activities.
Key outputs 2019	Technical advice provided and disseminated on public health microbiology methods.
Expected results	ECDC further established as source of information and technical standards for in the area of public health microbiology.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
10	Support the strengthening of public health infrastructure and processes.	Implementation of the ECDC Microbiology Strategy to support the development of sufficient microbiology capacity within the EU, to detect, prevent and manage infectious threats.	Proportion of Member States finding EULabCap country reports useful for their laboratory infrastructures and processes improvement.	77% (=23/30 EU/EEA Member States)	At least 70% of Member States reporting practical use of EULabCap report.	Report from survey on Competent Bodies' feedback on usefulness of EULabCap report.

Total resources Scientific Support (including microbiology):

Total FTEs for this activity: 16.82 FTEs

Total operational budget, Title 3: EUR 1 036 000

4.3. Preparedness and response

4.3.1 EU and country preparedness support

Article 4 of Decision 1082/2013/EU establishes an ambitious agenda for the full implementation of legal provisions, especially with regard to enhanced capacities to prepare for, and respond to, emerging threats in Member States. Providing technical support to that agenda is one of ECDC's top priorities for 2019 and beyond.

Health emergency preparedness planning, including identification of gaps, and building system capacities is critical if the EU and its Member States are to respond effectively to major epidemics and other serious cross-border health threats. Recent international threats have increased the awareness of public health emergency practitioners of the importance of basing their response on good scientific evidence, effective collaboration with critical sectors, and shared concepts of good practice across countries.

By 2019, strengthened cooperation is foreseen between preparedness support and capacity building to improve the Member States' readiness to respond to public health emergencies. Between 2013 and 2016, ECDC strengthened the evidence base in this area and developed instruments and guidance to support countries in the identification of gaps and needs in their emergency response systems (including tools for risk categorisation, self-assessment, and case studies). Since 2016, ECDC has provided direct support by reinforcing capacity in specific areas, such as testing and proofing effectiveness of public health readiness and strengthening core capabilities in critical preparedness areas. In order to develop closer links with countries, The Centre's efforts in 2019 will increasingly focus on subregional activities, prioritising areas with the most pressing needs. The extent and focus of these activities will be guided by the ECDC National Focal Points for Preparedness and Response and the priorities set by the Health Security Committee.

ECDC activities that support national health emergency preparedness planning will need to be harmonised with WHO's efforts to support the full implementation of emergency preparedness by countries under the International Health Regulations (IHR 2005). ECDC's planning and priority settings will be further informed by WHO and the results of WHO's global monitoring and evaluation scheme which assesses the capacity of countries under IHR.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective
Objective 2019 –1	Support the European Commission in monitoring the implementation of Decision 1082/2013/EU (in particular Art. 4 – preparedness) with strengthening of the scientific evidence base, gap analysis of the public health emergency preparedness of individual Member States, and identification of areas for enhanced support.
Key outputs 2019	Based on agreement with WHO, activities aligned for improving the implementation and monitoring of country response capacities under IHR, by supporting national preparedness planning.
Expected results	National preparedness plans reviewed through simulation exercises and/or after action reviews in at least six countries, identified through needs assessments and analysis of surveys.

ECDC strategic objective	Strategic objective 3
Objective 2019 – 2	Strengthen preparedness in countries by providing methodological advice on effective health emergency preparedness planning, evaluation of response plans and their interoperability while supporting the Health Security Committee and its working groups; additional WHO IHR technical consultations.
Key outputs 2019	<ul style="list-style-type: none"> • Technical guidance and tools in support of national health emergency preparedness planning. • Technical support to the Preparedness Working Group under the Health Security Committee and IHR. • Direct support for countries' preparedness planning based on needs assessments in a country-specific and regional (multi-country) approach. • Regional (multi-country) training workshops conducted on a set of proofing tools (simulation exercise planning, critical incident review, and assessment protocols) (Note: Can be deprioritised in case of emergency). • Set of standardised competencies on public health emergency preparedness adopted by National Focal Points and agreement reached on a pilot monitoring framework for their integration in national plans of at least four Member States.
Expected results	Countries better equipped to implement national public health emergency preparedness planning.

ECDC strategic objective	Strategic objective 3
Objective 2019 – 3	Support exchange of knowledge and good practice among relevant professionals and organisations at EU and regional (multi-country) level, to further strengthen country response system capacities and capabilities, and promote applied research for effectiveness of public health emergency preparedness in EU.
Key outputs 2019	<ul style="list-style-type: none"> • Annual NFP meeting focused on application of methodologies in different contexts and outcome of applied research projects. • Links established with European research groups on public health preparedness.
Expected results	Exchange of knowledge and best practice on key preparedness elements through the network of national focal points, academia and non-governmental organisations supporting health emergency system research on topics identified through expert meetings.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
12	Support the strengthening of public health infrastructure and processes.	Support the European Commission in monitoring the implementation of Decision 1082/2013/EU (in particular Art. 4 on preparedness) with scientific evidence base, gap analysis on public health preparedness of individual Member States and identification of areas for enhanced support.	Annual monitoring report on analysis of Member States progress plans, as mentioned in Article 4 of Decision 1082, submitted to the European Commission.	n/a	Monitoring report on Art. 4 accepted by European Commission and submitted to HSC.	Agenda of HSC
13	Support the strengthening of preparedness in countries by identifying gaps in preparedness plans and providing action plan.	Strengthen preparedness in countries by identifying gaps in preparedness plans and providing action plan.	Number of review of Member State preparedness plans.	n/a	Five EU/enlargement countries' preparedness plans reviewed by ECDC.	Technical reports published on ECDC website.

4.3.2. Response

Decision 1082/2013/EU strengthens and intensifies coordination between the European Commission and Member States on preparedness and response against health threats. ECDC will continue to operate the Emergency Operations Centre (EOC) and host the extended EU Early Warning and Response System on Public Health Threats (EWRS). Other ECDC resources will facilitate the EU-level response to serious cross-border threats to health. Since 2006, ECDC has invested significantly in the EOC infrastructure. Moreover, ECDC continuously improves its processes in light of lessons learned during exercises and real-life public health emergencies.

Public health event (PHE) plans at ECDC were updated in 2017. A mechanism to mobilise European public health teams for communicable disease emergencies will be implemented in collaboration with WHO Global Outbreak Alert and Response (GOARN) and EU Medical Corps (EMC) mechanisms. This will improve ECDC's contribution to international response missions.

Specific improvements in the current EWRS tool to integrate new functionalities will be discussed with DG SANTE. The collaboration with Member States in the area of threat detection will be improved through the annual meeting with the NFP for threat detection. Ad hoc meetings also contribute to maintain the coordination between ECDC and the Member States.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 6
Objective 2019 – 1	Ensure timely delivery of high-quality rapid risk assessments (RRA) as requested by the Commission, the Member States, or ECDC's Round Table.
Key outputs 2019	Timely rapid risk assessments for specific threats, in accordance with the criteria defined in Decision 1082/2013/EU, as requested by the Round Table, the European Commission, and the Member States.
Expected results	Any serious cross-border health threat in Europe timely detected and communicated to the Commission and Member States to allow for rapid action; threats also reported to WHO and relevant stakeholders.

ECDC strategic objective	Strategic objective 6
Objective 2019 – 2	Ensure the capacity and the involvement of Member States in the production of RRA.
Key outputs 2019	Mechanisms and procedures established to ensure the proper participation of Member States in the production of RRA.
Expected results	RRA produced with the participation of Member States, thus ensuring better transparency and involvement.

ECDC strategic objective	Strategic objectives 6 and 7
Objective 2019 – 3	Reinforce the participation of ECDC expert teams in response support activities for Member States and EU neighbouring countries facing outbreaks and crises in the area of infectious diseases and biological threats of intentional nature (e.g. bioterrorism).
Key outputs 2019	ECDC missions to support Member States and neighbouring countries during outbreaks of infectious diseases, epidemics and biological threats of intentional nature.
Expected results	Improve the response capacity of Member States to address outbreaks and public health crises.

ECDC strategic objective	Strategic objectives 6 and 7
Objective 2019 – 4	Ensure the participation of ECDC experts in international response missions (in cooperation with DG ECHO).
Key outputs 2019	Validate the mechanism through which public health experts from ECDC and Member States participate in international missions (together with ECHO and civil protection officials).
Expected results	Joint international missions co-organised with ECHO, based on the civil protection mechanism and with the participation of experts from Member States.

ECDC strategic objective	Strategic objectives 6 and 7
Objective 2019 – 5	Contribute as trainer to GOARN, WHO and the EUCPM training sessions on 'Outbreak response for international missions'.
Key outputs 2019	<ul style="list-style-type: none"> Contribution to training sessions for outbreak response. Attendance to the training sessions offered to ECDC staff and experts in Member States.
Expected results	Training courses, workshops and seminars attended by epidemiologists from ECDC, Member States and EPIET/EUPHEM fellows.

ECDC strategic objective	Strategic objective 6
Objective 2019 – 6	Finalise the updated version of the EWRS.
Key outputs 2019	Improve the functionalities and operation of the updated EWRS after its first release in 2018.
Expected results	Improved version of EWRS, based on the needs of the Commission and Member States. Improvements might be required after user feedback; requested changes which were postponed added to future updates. Support for users and training activities on the updated EWRS.

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019 – 7	Ensure the proper update of SoHO risk assessments.
Key outputs 2019	<ul style="list-style-type: none"> Finalise assessing the risk and prevention of bacterial infection transmission through SoHO. Organise expert meeting on the prevention of HAV transmission through SoHO. New framework contract on safety of SoHO. Perform biannual evaluation of the screening strategies. Assess risks due to SoHO in the risk assessments.
Expected results	Risk assessment report, expert meeting report, FWC signed, screening policy evaluation report.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
14	Coordinate and support the rapid assessment of risks and the identification of options for response.	Provision of relevant, timely and quality rapid risk assessment to support the risk management carried out by the Member States and the European Commission.	<ul style="list-style-type: none"> Average number of downloads per RRA. Level of satisfaction for RRA by ECDC stakeholders. 	325 downloads per item on average 90% (source: stakeholder survey 2015)	+ 10% increase > 75% satisfaction on usefulness and impact	Source SARMS (ECDC Scientific Advice Repository and Management System); ECDC stakeholder survey, external evaluation, dedicated evaluations.

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
15	Coordinate and support the rapid assessment of risks and the identification of options for response.	Mobilisation mechanisms for public health response teams developed.	Provision of support teams upon request from Member States.	100%	All requests for response support from Member States honoured.	List of requests from Member States; repository of support teams set up (DMS).

Total resources Preparedness and Response:

Total FTEs for this activity: 11.36 FTEs

Total operational budget, Title 3: EUR 650 000

4.4 Training and capacity building

4.4.1 Training

In 2015, the ECDC Management Board approved a new public health training strategy. The strategy outlines the specific role of ECDC in the European training landscape, being complementary to, and supportive of, the training activities of other national actors, including institutes of public health, universities and schools of public health and adding European values to national efforts. The strategy further defines the primary target audience to be experts at the Member States and the Community levels, who are designated to contribute to dealing with cross-border health threats due to communicable diseases. Effectively, this target audience will be approximated by the sum of all professionals who are formal members of ECDC-related networks. However, through supporting cascading of training within the countries and by making e-learning accessible to all professionals working on disease prevention and control, ECDC aims to support training programmes and assist Member States to train also other professionals at local, subnational and national levels that contribute to communicable disease preparedness, prevention, detection, assessment and control. The strategy also emphasis competency-based training in a needs-based approach. A comprehensive training needs assessment was carried out in 2015 and planned to be periodically updated in coordination with the NFP for Training.

Complementary to the training efforts above, ECDC supports the overall EU capacities to respond to outbreaks of communicable diseases and other health threats through the ECDC Fellowship Programme with its two paths of intervention epidemiology and public health microbiology. The Programme is being evaluated in 2018–2019, and the outcome will steer discussions on how to best meet future changing demands on competencies for effective response.

The key objectives of ECDC's public health training activities as defined in the new training strategy are to:

- strengthen and maintain the workforce in the Member States and at the Community level through relevant training of key national experts, in order to ensure adequate performance of functions for communicable disease preparedness, prevention, detection, assessment and control, both nationally and cross-border;
- strengthen and maintain a network of European and global training partners, supporting capacities to provide training to the workforce in the EU at local, subnational, national and community levels; and to
- support the cascading of training within the Member States by providing a common virtual training infrastructure with access to training material, e-learning and platforms for communities of practice.

To meet these strategic objectives, ECDC initiated a new Continuous Professional Development Programme (CPDP), supporting professional development in the ECDC networks within the Coordinating Competent Bodies through continuous education (life-long-learning) in a blended format. These senior public health professionals are expected to support cascading of training within their countries based on ECDC's common virtual training infrastructure with access to training material, e-learning courses and platforms for communities of practice.

Following guidance from the Management Board and the 2015 Joint Strategy meeting, ECDC has put the formerly separate EPIET and EUPHEM programmes as paths into one single programmatic framework. This approach will allow further additions of professional paths through the programme, e.g. hospital hygiene. An external evaluation of ECDC's Fellowship Programme started in 2018 to guide further improvements.

ECDC will continue to look for synergies and sharing of experiences and resources with its partners, mainly the Association of Schools of Public Health in the European Region (ASPHER).

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 4
Objective 2019 – 1	Continuous quality improvement of the 'ECDC Fellowship Programme', with the EPIET and EUPHEM paths.

ECDC strategic objective	Strategic objective 4
Key outputs 2019	<ul style="list-style-type: none"> • More efficient integrated administrative routines, better use of human resources and enhanced cross-discipline collaboration. • Strengthened collaboration with other fellowship programmes, relevant for our mandate in a One-Health and All-Hazards approach (e.g. EFSA, WHO)
Expected results	<ul style="list-style-type: none"> • Ensure the performance of the new programme • Updates of format, curriculum and administrative mechanisms, based on results of external evaluation in 2018–2019

ECDC strategic objective	Strategic objective 4
Objective 2019 – 2	Consolidate the new Continuous Professional Development Programme.
Key outputs 2019	<ul style="list-style-type: none"> • ECDC summer school • Core workshop and specific courses as defined by the CCB networks • Senior exchange initiative • E-learning courses continuously added • Simulation exercises as an essential component of the CPDP
Expected results	The programme supports the training needs of the Member States.

ECDC strategic objective	Strategic objective 4
Objective 2019 – 3	Continue implementing the collaboration agreement with ASPHER.
Key outputs 2019	<ul style="list-style-type: none"> • Network of ASPHER schools of public health with a training on communicable diseases control established and working closely with ECDC and National Focal Points for Training; (Note: Can be deprioritised in case of emergency). • Core competencies defined and curricula developed by joint ECDC/CCB/ASPHER working groups; (Note: Can be deprioritised in case of emergency).
Expected results	Exchange of experience with public health schools; partnerships for exchange of methodologies, training materials and trainers, joint training activities, including online courses.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
16	Support the strengthening of public health workforce capacity and capability	Strengthen and maintain the workforce in the Member States and at the community level through relevant training of key national experts, in order to ensure adequate performance of functions for communicable disease preparedness, prevention, detection, assessment and control nationally and across borders.	a. Number of people trained per Member State, per ECDC public health core function b. Participant satisfaction with ECDC training activities. c. Number of scientific articles of public health relevance by ECDC Fellowship Programme (EPIET/EUPHEM) during and two years after graduation. d. Number of Fellowship graduates working in public health per Member State, per discipline (absolute and proportional)	a. 80 fellows enrolled in ECDC Fellowship Programme; 397 participants in CPDP programme b. Fellowship Programme: 100% (2016); CPDP: 86% (2017) c. +80% (from 0.9 to 1.6 publication per fellow) (2016) d. n/a	a. >40 fellows in 2 cohorts included in ECDC fellowship, >300 participants to CPDP training activities (short courses, e-learning and senior exchange) b. >75% satisfaction c. > 50% increase compared to the 2-year period before entering the Programme. d. Reduction of the gaps identified by the Training Needs Assessment	a. From ECDC training database (CRM): number of trained people b. Course evaluation c. Database + ECDC Virtual Academy (EVA) platform, bibliometrics (PubMed, Scopus) d. ECDC Virtual Academy (EVA) : follow-up of graduates (profile updates), LinkedIn, PubMed, CCB

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
17	Support the strengthening of public health workforce capacity and capability	Strengthen and maintain a network of European and global training partners, supporting capacities to provide training to the workforce in the EU at local, subnational, national and community levels.	Perceived added value of ECDC public health training activities by training stakeholders.	>75% (88% EPIET; 75% EUPHEM; 84% short courses; 76% summer school; 78% e-learning) – source stakeholder survey 2015.	> 75%	Annual consultation with NFP for Training

4.4.2 Coordinated country support

ECDC has provided capacity support to the Member States since its establishment through various means, such as training, assessments/peer reviews, facilitation of sharing of experiences and good practices, development of toolkits and guidance, laboratory support, etc. While there is a system (IRIS) in place for prioritising scientific advice topics in ECDC work programmes, such a system does not exist for prioritisation of other capacity building activities. These activities have not always been implemented in a coordinated and structured way, and were often based on an ECDC perspective rather than a country perspective.

In June 2016, the ECDC Management Board approved a new country support strategy with three objectives:

- Define, together with the Member States, robust methodologies to assess capacity, training and other support needs and opportunities in EU countries and regions.
- Agree with the Coordinating Competent Bodies and the Advisory Forum on country-driven transparent methods for priority setting of ECDC country support activities.
- Plan and implement together with the Coordinating Competent Bodies a structured and cost-efficient country support aimed at all or groups of countries, meeting identified needs and finding synergies between actions.

A plan to implement the country support strategy through structured expression of needs, a transparent evaluation mechanism and a process leading up to collaboration agreements between ECDC and a country/group of countries outlining the commitments of both sides was agreed in 2016. The system piloted in 2017 will be fully rolled out by 2019 after necessary adaptations. The country support mechanism will be supported by a new ICT tool that will keep track of all interactions between ECDC and any of the Member States. ECDC country support activities will be coordinated with the WHO, whenever relevant.

The Centre's activities in this area also support the Commission's 'State of Health in the EU' initiative, aiming to strengthen country-specific and EU-wide knowledge on health to boost analytical capacity and better support EU Member States and Commission services in their evidence-based policymaking.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 3
Objective 2019 – 1	New mechanism implemented for targeted country support based on expressed needs; transparent prioritisation process.
Key outputs 2019	Country support agreements based on the new mechanism. Mechanism implemented after a pilot in 2017. Work initiated on an ICT tool supporting the work with the countries.
Expected results	Better respond to country support needs in the area of communicable diseases.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
18	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Provide coordinated support to the Member States through the Coordinated Country Support (CCS) mechanism.	Level of satisfaction of the countries that requested support from ECDC through the Coordinated Country Support mechanism.	n/a	>75% of the countries satisfied.	Survey with recipients of the support mechanism.

4.4.3 International relations

In accordance with the priority setting identified in the ECDC International Relations Policy 2014–2020 and the objectives and priorities of the EU external policy, a key focus of ECDC’s international relations activities in 2019 will be the development of technical cooperation activities, exchange of information, and capacity strengthening initiatives with EU enlargement and European Neighbourhood Policy (ENP) partner countries.

Working in coordination with the European Commission and the health authorities in EU enlargement and ENP partner countries, ECDC aims to integrate country experts into its activities, systems, and networks, as defined in the ECDC International Relations Policy 2014–2020.

Co-responsibility will be the guiding principle in advancing ECDC support to EU accession process with EU enlargement countries. ECDC will continue, upon the request of the European Commission and with the financial assistance from TAIEX, to assess countries’ communicable diseases prevention and control systems. ECDC will support countries to develop action plans addressing the assessment recommendations, and follow-up their implementation to provide evidence to the Commission. ECDC will continue to support the integration of national functions into ECDC structures and activities, by means of an ECDC–IPA5 grant. This is subject to the Commissions’ award decision.

The level of ECDC activities with ENP partner countries in 2019 and beyond will be fully dependent on the availability and sustainability of external EU financial assistance. ECDC will continue its support to bring ENP partner countries closer to EU standards and foster health security by strengthening country capacities to respond effectively to health threats related to communicable diseases, provided the availability of EU funding.

Particular attention will be given to further support the Commission in implementing the new Association Agreements between Eastern ENP partner countries and the EU. Upon request and based on the assessment of communicable disease prevention and control systems in these countries, ECDC will support the country in developing an action plan, and the Commission in monitoring its implementation in cooperation with international partners.

Building upon existing bilateral agreements with other centres for disease prevention and control (CDCs) in non-EU countries and key international partners (e.g. WHO/Europe), ECDC will continue implementing collaborative actions in an aligned way and seek possibilities to develop multilateral initiatives among global CDCs and other international partners.

Finally, ECDC will provide technical support to the Commission for its regional initiatives and dialogues with international partners and third countries. This is undertaken within the framework of relevant EU external policies and coordinated at the operational level via the Directorate-General (DG) Health and Food Safety with other DGs of the Commission and the European External Action Service.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 3
Objective 2019 – 1	Complete, upon request from the European Commission, one technical assessment of an EU enlargement country and implement ECDC technical cooperation pre-accession activities with EU enlargement countries (ECDC-IPA5 project with external financial support from the European Commission, 2017–2019) (Note: Can be deprioritised in case of emergency)
Key outputs 2019	<ul style="list-style-type: none"> • Technical Assessment Report with recommendations. • Advice and assistance to monitor the countries’ progress in addressing assessment recommendations. • Follow-up regional meeting on topic of common interest for National ECDC Correspondents and other key stakeholders in EU enlargement countries. • Participation of EU enlargement countries experts in ECDC networks, technical discussions, and projects. • Improved reporting on selected EU notifiable communicable diseases to ECDC surveillance and epidemic intelligence systems (TESSy, EPIS). • Completion of ECDC-IPA5 technical cooperation project supported by EU external funding (through the IPA II by DG NEAR).
Expected results	Post-assessment phase up and running, effective assistance in further development of countries’ capacities in surveillance, detection and reporting on communicable diseases through implementation of post-assessment action plans adopted by countries. Enhanced communicable disease surveillance and control capacities; improved preparedness capabilities.

ECDC strategic objective	Strategic objective 4
Objective 2019 – 2	(If EU financial assistance is available) Upon request from the European Commission, and in coordination with international partners if appropriate, support the strengthening of communicable disease surveillance and control systems in Ukraine, Moldova, and Georgia.
Key outputs 2019	Monitoring of post-assessment action plans and, upon request, technical cooperation activities implemented together with these countries.
Expected results	Post-assessment active; effective assistance provided; strengthened country capacities in surveillance, detection and reporting of communicable diseases through the implementation of post-assessment action plans.

ECDC strategic objective	Strategic objective 4
Objective 2019 – 3	(If EU financial assistance is available) Continue to support the progressive integration of ENP partners into ECDC activities and enhance health security to strengthen the countries closest to EU borders' capacities to respond to health threats related to communicable diseases
Key outputs 2019	Follow-up of project under the European Neighbourhood Instrument (ENI) or other financial instruments initiated; implementation started if grants from European Commission were made available. Sustainable capacity building initiative implemented in ENP partner countries and continuation of technical cooperation with ENP partners under ENI or other financial instruments, if grants from European Commission were made available.
Expected results	Increased capacity to respond effectively to health threats in countries closest to the EU borders.

ECDC strategic objective	Strategic objective 4
Objective 2019 – 4	Strengthen and deepen ECDC cooperation with the major centres for disease prevention and control (CDCs) across the globe.
Key outputs 2019	Regular interaction with contact points in other CDCs to coordinate, support and promote the cooperation. Monitoring and evaluating the implementation of the memorandums of understanding between ECDC and those organisations.
Expected results	Improved capacity to detect threats through cooperation with other partners. Establishing ECDC as a trusted provider of data and scientific evidence, with the capacity to mobilise EU expertise to provide technical assistance and support.

ECDC strategic objective	Strategic objective 3 and 7
Objective 2019 – 5	Enhance collaboration with WHO/Europe to further implement the bilateral administrative agreement.
Key outputs 2019	Reviewed set of processes for joint activities (e.g. joint reports, coordinated surveillance) under the collaboration framework with WHO/Europe.
Expected results	Decreased reporting burden for the Member States (e.g. avoid double reporting).

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
19	Support the strengthening of public health infrastructure and processes	Assess the capacities of EU pre-accession countries in the area of prevention and control of communicable diseases, and their progress in the implementation of the EU acquis	Proportion of pre-accession countries for which progress is monitored annually	100%	Annual update sent to the Commission for 100% of countries assessed	Survey with recipients of the support mechanism
20	Support the strengthening of public health infrastructure and processes	Support the progressive integration of EU pre-accession and European Neighbourhood Policy partner countries into ECDC activities, funded through external EU financial assistance	<ul style="list-style-type: none"> Average annual attendance rate to ECDC events by EU pre-accession and ENP partner countries Level of satisfaction from EU pre-accession and ENP partner countries on ECDC support for their progressive integration into ECDC 	n/a 71%	75% 75% of respondents satisfied	Meeting attendance lists = total number of national experts attending ECDC meetings/total invited Bi-annual survey with all experts of pre-accession and ENP partners countries
21	Support the strengthening of public health infrastructure and processes	Strengthen the cooperation and partnership with major international CDCs across the globe through formal bilateral agreements with ECDC	<ul style="list-style-type: none"> Proportion of partner CDCs for which Focal Points have been designated Proportion of partnership agreements for which evaluations are conducted 	100% (4) 75%	100% 75% of MoUs/partnerships evaluated	CRM, International Relations Section statistics
22	Support the strengthening of public health infrastructure and processes	Enhance the collaboration with WHO/Europe and revitalise the existing Memoranda of Understanding with CDCs in non-EU countries	Level of satisfaction from EU/EEA Member States on ECDC collaboration with WHO/Europe	n/a	75% of EU/EEA countries satisfied	ECDC stakeholder satisfaction survey includes the question to measure satisfaction of countries on ECDC/WHO collaboration and joint outputs

Total resources training and capacity building:

Total FTEs for this activity: 20.11 FTEs

Total operational budget, Title 3: EUR 4 077 000

4.5 Communication

4.5.1 Health Communication

ECDC, as the main European agency for risk assessment in the area of communicable diseases, has an important role in ensuring that health professionals and policymakers across Europe act on the basis of the best available information and evidence. This information may be generated by ECDC and its networks as well as by partners in the countries, including academia, the Commission and WHO.

ECDC-generated content is disseminated through an array of communication channels, including social media, and in close partnership with communication experts across Europe. Content from other parties may be disseminated through communities of practice supported by ECDC.

The ECDC Communication Strategy stipulates that the four main target groups that ECDC serves are health professionals, policymakers, the media, and health communicators. ECDC will support national authorities and other stakeholders in efforts to reach their citizens, but does not address the general public as a direct audience.

Risk communication is considered an essential part of risk management and is thus the prime responsibility of the Member States and the Commission. Consequently, the role of ECDC is to facilitate the identification of shared priorities, the provision of data and data analysis, and the sharing of best practice with risk communicators in the Member States, for example by supporting the European Antibiotic Awareness Day campaign, or addressing vaccine hesitancy. ECDC also supports the Communicators' Network under the Health Security Committee.

ECDC works closely with its counterparts in the Commission to ensure consistency, synergy and alignment with the Commission's activities and priorities in the health area. It also supports the Commission in its coordinating role in the context of serious cross-border health threats.

ECDC has an important role in supporting Member States to build and reinforce their emergency risk communication capacities as part of their national preparedness planning. In all relevant communication activities, the Centre works closely with the WHO.

Table. Objectives, key outputs, and expected results

ECDC strategic objective	Strategic objective 1
Objective 2019 – 1	Ensure that ECDC scientific and technical outputs are timely, easily available, impactful, (re-)usable and adjusted to the needs of our target audiences.
Key outputs 2019	<ul style="list-style-type: none"> Timely communications of ECDC scientific and technical content adapted to its main target audiences through an array of appropriate communication channels, fully utilising the website. Timely communication outputs targeting policymakers, suitable to inform policy and decision-making.
Expected results	ECDC scientific and technical content available to those who need it, right when they need it, and delivered in an appropriate format. Policy decisions on communicable disease prevention and control, informed by ECDC science and guidance.

ECDC strategic objective	Strategic objective 2
Objective 2019 – 2	Consolidate the reputation of ECDC as an independent, transparent agency that produces high-quality scientific content.
Key outputs 2019	<ul style="list-style-type: none"> Media coverage of ECDC in European public health media. Communication support for ECDC authors who send output to scientific publications, including peer-reviewed journals. Active presence in ESCAIDE and other key public health conferences and meetings. Presence in social media.
Expected results	Target audiences and key experts have increased awareness of ECDC's brand, refer more often to ECDC, and use ECDC's content.

ECDC strategic objective	Strategic objective 3
Objective 2019 – 3	Support knowledge sharing; share information and analysis among stakeholders, with a focus on strengthening communication capacity and preparedness in EU Member States.
Key outputs 2019	<ul style="list-style-type: none"> Capacity building activities (e.g. ECDC materials, workshops) in the area of emergency risk communication. Technical support and joint activities with the communication working group of the Health Security Committee. Support to national health communication campaign activities, notably the European Antibiotic Awareness Day and the European Immunisation Week. Active collaboration and sharing of information across communities of risk and crisis communicators in Europe.
Expected results	Emergency risk communication better integrated in national preparedness planning. Increased public awareness of risks linked to AMR and suboptimal vaccine coverage.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
23	Support efficient decision-making by enabling the sharing of evidence and expertise.	Ensure that ECDC's scientific and technical outputs are timely, easily available, impactful, reusable and adjusted to the needs of our target audiences.	Usage of the ECDC web portal and social media channels. Perception of timeliness, usability and usefulness of ECDC output.	1 281 596 website sessions; 3 909 Twitter followers (ECDC corporate Twitter account) n/a	+5% page views on web portal; +10% followers on Twitter Favourable perception of at least 75% respondents	Web and social metrics used for verification Perception study, stakeholder survey and feedback collected through annual NFP meeting for communication (Indicators are aligned with Communication Strategy)
24	Support efficient decision-making by enabling the sharing of evidence and expertise.	Consolidate the reputation of ECDC as an independent, transparent agency that produces and disseminates high-quality scientific content.	Increase of media articles in Europe referencing ECDC and its experts.	8 292 media clippings in the EU mentioning ECDC in 2017	+5% compared to previous year	Media monitoring (Indicators are aligned with Communication Strategy)
25	Support efficient decision-making by enabling the sharing of evidence and expertise.	Support sharing of knowledge, data and analysis among stakeholders with a focus on strengthening communication capacity and preparedness in EU Member States.	Favourable perception of ECDC communication capacity support activities by NFPs (materials, workshops, meetings, country visits, training activities) in the area of risk and crisis communication.	n/a	Favourable perception of at least 75% respondents	<ul style="list-style-type: none"> Perception study, stakeholder survey and feedback collected through annual NFP meeting for communication Indicators are aligned with Communication Strategy

4.5.2 Eurosurveillance

ECDC became publisher of *Eurosurveillance* in 2007. Since then, the journal has gained reputation as a credible source of scientific and public-health-relevant information for the prevention and control of communicable diseases. The second ECDC external evaluation confirmed that public health experts and policymakers in the EU deem the journal highly valuable and useful for their work. The journal metrics (a proxy measure of scientific importance/relevance) have been favourable; *Eurosurveillance* has been ranked among the leading journals in its field for over six years.

Eurosurveillance launched a new publication platform in 2017 that supports transparent workflows and facilitates the publication and retrieval of scientific articles. The journal will continue to share information for public health action in an open access format.

Contributions to broadening the scientific evidence-base of epidemiology, surveillance, and the prevention and control of infectious diseases will be achieved through the publication of methodological and conceptual articles and articles presenting results generated through evidence-based methods. Principles of publication ethics and research integrity will be applied and promoted among colleagues, contributors and the journal's audience.

A number of initiatives will support the dissemination of the journal's content such as presence and presentations at scientific meetings, scientific seminars (every other year), international conferences (e.g. ESCAIDE), and strategic use of social media.

In 2019, *Eurosurveillance* editors will continue to support training activities on the generation of scientific publications/articles and the development of critical appraisal skills. Journal articles on approaches and methodology will complement related ECDC activities.

The editorial team will rely on its well-established network of experts. The annual board meeting, which takes place in even years, used to serve as a source of important strategic input for the journal policy. *Eurosurveillance* currently considers changing the format and replacing it by a teleconference with the associate editors. *Eurosurveillance* will continue its regular information exchanges in written form with the board to reinforce contacts with experts in the national institutes.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective
Objective 2019 – 1	Continue production of <i>Eurosurveillance</i> as an attractive and informative journal, with good visibility and reputation that supports ECDC capacity building activities and contributes to closing the gap in the available evidence base in international scientific databases, with a clear focus on the prevention and control of communicable disease in Europe.
Key outputs 2019	<ul style="list-style-type: none"> • 50 issues published. • One scientific seminar at the margins of ESCAIDE. • Regular provision of information through social media. • Provision of articles with data/evidence supporting public health decision-making from at least 15 different European countries.
Expected results	<p>The timely provision of public health-relevant rapid communications and the provision of articles with data/evidence from at least 15 different European countries supports public health action and facilitates scientific debate.</p> <p>The journal remains attractive for authors through ranking in the first quartile of journals in its field in relevant metrics (JCR, SCImago and Google Scholar) and an IF above 5.</p> <p>Enhanced reputation as authoritative and credible source of information in our field.</p> <p>Journal serves as educational source for public health experts in EU countries.</p>

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Support efficient decision-making by enabling the sharing of evidence and expertise.	Consolidate the high-level profile and attractiveness of <i>Eurosurveillance</i> .	<ul style="list-style-type: none"> • Impact factor for <i>Eurosurveillance</i> and journal rank positioning in first quartile. • Articles accepted for publication from countries represented on the <i>Eurosurveillance</i> board. 	7.2 27	IF >5 Articles received from authors of at least 15 countries	Journal Citation Reports, Thomson Reuters, SCImago EU/EEA and candidate countries

Total resources Communication and Eurosurveillance :

Total FTEs for this activity: 26.54 FTEs

Total operational budget, Title 3: EUR 479 400

4.6. Disease programmes

4.6.1 Antimicrobial Resistance and Healthcare-associated Infections – ARHAI

Antimicrobial resistance (AMR) and healthcare-associated infections (HAIs) are high on the EU and global agenda, as the various AMR threats keep increasing. Prudent use of antimicrobials, infection prevention and control, and the need for new antibiotics will continue to be the focus of European initiatives. The alarming trend of increasing resistance to last-line antimicrobial agents such as carbapenems and polymyxins in gram-negative bacteria, as reported by EARS-Net and the EuSCAPE project in 2013–2015, requires close surveillance and concerted efforts in the EU and at the international level. This will continue in 2019.

Despite recent efforts and successes at all levels, awareness among healthcare professionals and the general public is poor, especially with regard to the prudent use of antibiotics and measures for the control and prevention of infections. Moreover, guidance documents, examples of best practice, and success stories about the prevention and control of AMR and HAI are rarely shared between Member States.

Since 2014, our stakeholders have asked for intensified efforts on the surveillance, prevention and control of AMR and HAIs. The high priority of AMR and HAIs on the European and global agenda is likely to continue in 2019 and the following years. On 22–23 October 2015, the Transatlantic Task Force on AMR (TATFAR) discussed a new set of actions, including ten actions to which ECDC needs to contribute (2016–2020).

On 29 June 2017, the European Commission adopted the European One Health Action Plan against AMR, which contains concrete actions with EU-added value, with the objectives of making the EU a best-practice region, boosting research, development and innovation, and shaping the global agenda on AMR.

In addition, by 2019, a) WHO will follow-up with the implementation of the Global Action Plan on AMR, b) the Global Health Security Agenda (GHSA) will continue the implementation of its AMR Action Package, and c) the Northern Dimension Partnership on Public Health and Social Well-being (NDPHS) will continue the implementation of its action plan, including measures related to AMR.

Table. Objectives, key outputs 2019, and expected results

For AMR:

ECDC strategic objective	Strategic objective
Objective 2019 – 1	Improve the quality and sustainability of surveillance systems on AMR and antimicrobial consumption at EU level, as well as comparability of data.
Key outputs 2019	Updated, comprehensive surveillance data on AMR (EARS-Net), including application of the new case definitions for AMR, continued molecular typing surveillance of carbapenem-resistant and/or colistin-resistant Enterobacteriaceae. First comprehensive report on AMR across communicable diseases. Contribution to the standardisation of antimicrobial susceptibility testing. Updated, comprehensive surveillance data on antimicrobial consumption (ESAC-Net), including data from hospitals. Work jointly with EFSA and EMA on harmonising surveillance and joint analyses of AMR and antimicrobial consumption.
Expected results	Better understanding of AMR due to the higher accessibility and quality of ECDC-consolidated surveillance data. Increased potential for Member States to inform their policies based on improved EU-wide data. Better understanding/alignment and interoperability of areas such as AMR and antimicrobial consumption, molecular typing surveillance, as well as HAIs.

ECDC strategic objective	Strategic objectives 1 and 3
Objective 2019 – 2	Support activities on AMR, through the provision of advice, guidance and training, as well as country support, in cooperation with the European Commission and Member States.
Key outputs 2019	Support to the European Commission on the implementation of the European One Health Action Plan against AMR, and close collaboration with Member States on their Joint Action on AMR (and HAIs), including country visits to discuss AMR issues. Start work on ECDC–EMA joint scientific opinion/expert opinion on new antibacterial agents in human medicine (conditions for their use and measures to prevent and control the spread of resistance to these agents).
Expected results	Increased capacity and capability of Member States to prevent and control AMR.

ECDC strategic objective	Strategic objective 3
Objective 2019 – 3	Strengthen international collaborative activities on AMR, including collaboration with WHO, TATFAR, GHSA, NDPHS and other non-EU partners.
Key outputs 2019	Support WHO on the implementation of the Global Action Plan on AMR ²² , contribution the Transatlantic Task Force on AMR (TATFAR) ²³ , and contribution to the Northern Dimension Partnership on Public Health and Social Well-being (NDPHS) ²⁴ .
Expected results	Better alignment of activities and increased exchange of information as well as collaboration between ECDC and its international counterparts. ECDC further established as a key partner in international cooperation initiatives to prevent and control AMR and HAI.

²² For example by participating in WHO expert meetings and contributing data on EU/EEA countries to the WHO Global Antimicrobial Resistance Surveillance System (GLASS).

²³ By implementing many of the TATFAR actions.

²⁴ For example by providing independent scientific advice and expertise to its expert group on AMR.

ECDC strategic objective	Strategic objectives 1 and 3
Objective 2019 – 4	Raise awareness about prudent use of antibiotics through the European Antibiotic Awareness Day (EAAD), in partnership with the WHO World Antibiotic Awareness Week.
Key outputs 2019	European Antibiotic Awareness Day (EAAD), 18 November 2019, in partnership with the WHO World Antibiotic Awareness Week.
Expected results	Increased awareness about prudent antibiotic use, by the general public, health professionals and stakeholders in Member States and overall in the EU/EEA. Increased number of activities, including campaigns to promote the prudent use of antibiotics, at national, regional and local levels in Member States.

For HAI:

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019 – 5	Improve the quality and sustainability of surveillance systems on HAIs at EU level, as well as comparability of data.
Key outputs 2019	Updated, comprehensive surveillance data on HAIs, including on surgical site infections (HAI-Net SSI), infections acquired in intensive care units (HAI-Net ICU) and <i>Clostridium difficile</i> infections (HAI-Net CDI). Start work on an ECDC expert opinion on the usefulness and applicability of electronic data for surveillance of HAIs, and possible integration into HAI-Net.
Expected results	Better exchange of surveillance data and better interoperability (AMR, antimicrobial use, and HAIs)

ECDC strategic objective	Strategic objective 1 and 4
Objective 2019 – 6	Support activities on AMR-HAIs through the provision of advice, guidance and training, as well as informing about good practices, in cooperation with the European Commission and Member States.
Key outputs 2019	Support to training of healthcare workers for the prevention and control of HAIs, and control of multidrug-resistant micro-organisms in health care settings. Further implementation of the ECDC directory of online resources and toolbox for the prevention and control of HAIs and AMR.
Expected results	Increased workforce competence, and capacity and capability of Member States to prevent and control HAIs and AMR in healthcare settings.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	78.2% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the ARHAI networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the disease programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources ARHAI:

Total FTEs for this activity: 13.8 FTEs

Total operational budget, Title 3: EUR 1 400 000

4.6.2 Emerging and vector-borne diseases – EVD

Emerging and vector-borne diseases pose a special challenge to ECDC and national public health authorities due to the biological complexity of their transmission patterns and their epidemiological potential. In recent years, several vector-borne disease outbreaks have occurred in Europe. An increased establishment and spread of invasive mosquitoes has been observed; native ticks have spread to new areas. New pathogens were identified and emerged in new areas, increasing the risk of spread. It is anticipated that novel and unusual outbreaks of emerging and vector-borne diseases will occur with progressive risk towards endemicity in some areas.

Most vector-borne diseases are characterised by complex epidemiological features, like seasonality and periods of pathogen persistence in reservoirs or vectors without occurrence of human disease. They can quickly (re-)emerge or become (re-)introduced under suitable environmental conditions. One of ECDC's day-to-day contribution is to share real-time mapping of cases during transmission seasons for the whole of Europe, giving national health authorities timely information for decision-making. Furthermore, truly new or rare diseases might appear or re-appear. Efforts to monitor and control these uncommon diseases are hampered by often limited capacity for detection combined with a lack of knowledge or awareness of some clinicians.

It is important to stress that Member States are facing different threats with regard to these diseases. In general, though, four types of data are needed to understand and assess the risks linked to the different emerging and vector-borne disease situations:

- disease data
- pathogen presence (in human, reservoir hosts or vectors)
- the occurrence of vectors
- data on suitable environmental conditions and social/behavioural changes.

This requires a wider perspective on the surveillance of EVD than usual. Moreover, improved assessment tools are needed such as risk mapping, risk forecasting, and orientation on control strategies.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1, 2, 3, 4, 5, 6, 7 and 9
Objective 2019 – 1	Provide support on country preparedness, effective and efficient decision-making and response to threats related to EVD.
Key outputs 2019	<ul style="list-style-type: none"> • Scientific advice for ad-hoc risk assessments in the EU/EEA with the support of relevant networks (laboratory and medical entomology networks). • Scientific advice and guidance on tick-borne diseases and on vector control strategies for EVD. • Modelling tools to support the decision-making (surveillance and vector control strategies) for mosquito-borne diseases in the EU/EEA. • Support intersectoral collaboration with regard to EVD. • Assessment of the effects of social and environmental drivers of EVD (internal support). • Strengthen EVD public health capacity and capability. • Participation in ad hoc country visits to assess preparedness and/or response plans for EVD.
Expected results	Countries' general preparedness and response strengthened for emerging and vector-borne diseases in the EU. Decision-making process related to surveillance and control strategies supported.

ECDC strategic objective	Strategic objectives 1, 5 and 9
Objective 2019 – 2	Strengthen the surveillance of vector-borne diseases through the implementation of surveillance for notifiable EVD, the monitoring of vector distribution, and the timely reporting on EVDs that are prone to epidemics.
Key outputs 2019	<ul style="list-style-type: none"> • Analysis of TESSy surveillance data (using an integrated approach when appropriate). • Strengthen the epidemiological surveillance of Lyme borreliosis depending on the outcome of the survey in 2018. • Ad hoc and timely surveillance of EVD. • Providing data on human disease vectors and their related pathogens for vector and pathogen distribution mapping (ticks, mosquitoes and sandflies). • Explore current operational early warning systems for EVD in the EU/EEA.
Expected results	Analysis and overview of EVD trends and vector distribution in the EU/EEA. Timely surveillance data for diseases transmitted by mosquitoes to support national health authorities to implement intervention measures in a timely manner. Member States supported in the implementation of Lyme borreliosis surveillance.

ECDC strategic objective	Strategic objectives 1, 3, 4 and 5
Objective 2019 – 3	Increase laboratory capacity building for early detection and surveillance through an outsourced laboratory network in coordination with other EU initiatives
Key outputs 2019	<ul style="list-style-type: none"> Conduct external quality assessment (EQA) on viral pathogens for vector-borne diseases. Provide short training courses to improve the diagnostic capability of EU expert laboratories in the EU/EEA.
Expected results	Capacity building for laboratories strengthened for early detection and surveillance of vector-borne diseases.

ECDC strategic objective	Strategic objectives 1, 2, 4 and 8
Objective 2019 – 4	Promote multidisciplinary networking and partnerships with international stakeholders.
Key outputs 2019	<ul style="list-style-type: none"> Strengthen EVD-related networks to share expertise, best practices and lessons learnt. Ensure close collaboration with WHO and other international stakeholders.
Expected results	Intersectoral collaboration, capacity building strengthened, and capability improved at the country level.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes.	81% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the ARHAI network's annual survey.
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the Disease Programmes (as per periodical evaluation).	n/a	>75% satisfaction for the generic index, for all Disease Programmes	Generic index based on the evaluation of the programme, performed every five years (ongoing 2018–2021)

Total resources EVD:

Total FTEs for this activity: 5.94 FTEs

Total operational budget, Title 3: EUR 780 000

4.6.3 Food- and Waterborne Diseases and Zoonoses – FWD

The food- and waterborne diseases and Legionnaires' disease exemplify the concept of serious cross-border threats to health, as they are prone to outbreaks and clustering of cases (including fatalities) that can cross national and international borders, due to trade of contaminated food, water, and/or infected animals as well as due to international travel of humans. These characteristics, along with their potentially large economic impact on the trade and tourist industry, makes the early detection and effective investigation of outbreaks particularly important. This requires multidisciplinary collaboration and regular communication with public health authorities in charge of food safety, animal health, and environmental control to implement control and prevention measures in a timely manner. Therefore, ECDC works in close collaboration with EFSA and the European Union reference laboratories (veterinary reference laboratories), in line with the principle of 'One Health'. A joint EFSA–ECDC molecular typing database was piloted in 2015–2016 and became operational in 2018. A gradual increase in participating countries from the food and public health sectors is expected for 2019. The joint EFSA–ECDC report on scenarios to upgrade the joint ECDC–EFSA molecular typing database with whole genome sequencing (WGS) will be published in April 2019 in response to the mandate received from the Commission in 2017. This offers ECDC a good basis for the technical integration of WGS for the surveillance of FWD. Following the European-wide retrospective, multi-centre validation study on analytical pipelines of sequenced human *L. monocytogenes* isolates, an EU protocol for the EU-wide surveillance of listeriosis has been developed and will be piloted in 2019. It includes WGS and exposure assessments through national and EU standard questionnaires. The WGS-enhanced listeriosis surveillance is

scheduled to start in January 2019. A study was initiated with PulseNet International partners and EFSA to develop a global nomenclature for WGS-based typing of *Listeria* isolates and assess the global molecular epidemiology of listeriosis. Preparations continue to optimise the integration of WGS into surveillance and outbreak response of other FWD, like campylobacteriosis. In 2019, priority is on investigating the emergence of multidrug-resistant *S. Kentucky*-infections, the 10-year trend of listeriosis by age groups and gender, and two continuous and intermittent common source multi-country foodborne outbreaks, caused by strains of *L. monocytogenes* and *Salmonella* with demonstrated persistence in the food chain. Along with an increasing number of WGS-based signals of multi-country threats, clearer procedures with EFSA and the Member States are needed for assessing the public health risk and measuring the strength of evidence of WGS matching isolates.

The investments in strengthening the FWD surveillance through integration of molecular typing and have resulted in improved detection of multi-country foodborne outbreaks and a clear public health added value, as demonstrated by joint ECDC–EFSA rapid outbreak assessments and other publications. The focus of FWD DP will move from short-term objectives to medium- and long-term objectives aiming at robust enhanced surveillance, integrating laboratory, clinical and epidemiological data, monitoring trends and highlighting (re)-emergence of strains, assessing the public health impact of prevention and control measures/programmes implemented in the food and environmental sector, and identifying disease-specific at-risk population groups and risk factors in the EU/EEA. Focus continues towards joint analyses of ECDC and EFSA data in ‘thematic reports’ and other scientific publications, allowing a more in depth analysis of epidemiological features of selected pathogens.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1, 2 and 6
Objective 2019 – 1	Strengthen surveillance and in accordance with the ‘One Health’ principle, foster joint analyses of collected data, including AMR, in collaboration with relevant EU agencies so that effective preventive and control measures can be implemented (short-, medium, and long-term).
Key outputs 2019	<ul style="list-style-type: none"> • Joint surveillance reports (zoonoses and AMR) with EFSA. • Joint rapid outbreak assessments with EFSA. • Guidance for national surveillance of hepatitis E. • Establish a global WGS-based strain nomenclature for <i>Listeria monocytogenes</i> isolates in collaboration with PulseNet International, EFSA and other international partners, using a methodology/process that can be applied to other pathogens. • Preparation of FWD AMR integration to online Surveillance Atlas. • Other joint publications (Note: Can be deprioritised in case of emergency).
Expected results	Reliable evidence for short-, medium, and long-term preventive and control measures by risk managers

ECDC strategic objective	Strategic objectives 5 and 6
Objective 2019 – 2	Strengthen detection and investigation of prolonged multi-country food-/waterborne threats; real-time detection of outbreaks of travel-associated Legionnaires’ disease (TALD) in collaboration with relevant partners and in the spirit of ‘One Health’.
Key outputs 2019	<ul style="list-style-type: none"> • Multidisciplinary research on epidemiology of HEV (Note: Can be deprioritised in case of emergency) • Multidisciplinary investigation on persistence of selected <i>Listeria monocytogenes</i> and <i>Salmonella</i> strains (one of each), in close collaboration with EFSA, EURLs and Member States (Note: Can be deprioritised in case of emergency). • Scientific communications; peer-reviewed publications, outbreak reports; (Note: Can be deprioritised in case of emergency).
Expected results	Better compliance with the legal EU requirements on investigation of foodborne outbreaks (Directive 2003/99/EC, Chapter IV, Article 8); more outbreaks detected and investigated. Scientific evidence provided to policymakers in the field of public health risks related to FWD.

ECDC strategic objective	Strategic objectives 3, 4 and 9
Objective 2019 – 3	Promote the development of high quality analytical and technical capacity in national public health reference laboratories to detect, investigate and respond to emerging FWD and Legionnaires' disease (LD), and outbreaks allowing comparison of molecular typing data nationally and globally with human, food, feed, animal, and environmental (water) data.
Key outputs 2019	<ul style="list-style-type: none"> External quality assessments services for selected FWD (<i>Salmonella</i>, <i>Listeria</i>, STEC, <i>Campylobacter</i>) and Legionnaires' disease (Note: Can be deprioritised in case of emergency). Expert meeting on the integration of WGS to surveillance of Legionnaires' disease in accordance with the roadmap (Note: Can be deprioritised in case of emergency). Interlaboratory study on HEV diagnostics and typing. Interlaboratory study on WGS analysis pipeline for <i>Salmonella</i> in accordance with the roadmap. Capacity building opportunities through the FWD Expert Exchange Programme (FWDEEP) (Note: Can be deprioritised in case of emergency).
Expected results	Increasing number of countries with WGS capacity and better response to serious cross-border public health threats related to FWD.

ECDC strategic objective	Strategic objective 3
Objective 2019 – 4	Promote multidisciplinary networking and partnerships with international stake holders
Key outputs 2019	<ul style="list-style-type: none"> 9th FWD Network and CC meeting in Stockholm on 6–8 February 2019. ELDSNet Network and CC meeting. Collaborative activities with international stakeholders, e.g. WHO/Europe and PulseNet International, US CDC (Note: Can be deprioritised in case of emergency).
Expected results	Good preparedness for response to EU-wide and global foodborne and travel-associated Legionnaires' disease (TALD) events.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	82% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the FWD networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the Disease Programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources FWD:

Total FTEs for this activity: 8.98 FTEs

Total operational budget, Title 3: EUR 700 000

4.6.4 HIV, Sexually Transmitted Infections and Viral Hepatitis – HSH

This group of diseases shares similar basic determinants such as links to sexual behaviour or injecting drug use, affecting marginalised and stigmatised populations (including men who have sex with men, migrants, people who inject drugs or prison inmates). Another common characteristic is that these diseases tend to persist as asymptomatic chronic infections, with resulting challenges for disease detection, burden estimates, co-infection, prevention and control. Dedicated programmes for these diseases need specific evidence and good, up-to-date

data, which are difficult to obtain and validate. Many EU/EEA Member States have fragmented prevention and care services for HIV, STIs and viral hepatitis, which poses additional challenges for ensuring effective prevention and control. In order to overcome these challenges, evidence-based advice on effective measures to minimise the harm from these infections is crucial.

In 2019, ECDC will continue to explore how epidemiological data can be improved to present better estimates of the burden of these diseases and their epidemiological determinants. There is a need for further improvement for data on hepatitis B, hepatitis C and several STIs, including the epidemiological data collected as part of the European Gonococcal Antimicrobial Surveillance Programme. This will be done by working in close collaboration with Member States to understand the reasons for the lack of robust data and to identify ways of improving data collection. Monitoring the progress in response to several international commitments, such as the sustainable development goals or the Dublin Declaration, will be improved, in collaboration with key stakeholders (i.e. WHO and UNAIDS), ensuring that reporting burden on Member States is kept to a minimum.

Work on surveillance and response monitoring will be supplemented by high-quality, evidence-based scientific advice through the production of technical reports and guidance in areas of prevention and control that are identified as priorities by Member States and the European Commission. In 2019, the following documents will be produced (in order of priority): exploring methods to improve hepatitis vaccination coverage of key populations; describing barriers to test-and-treat policies; the impact of PrEP/PEP (pre-/post-exposure prophylaxis) for STI; guidance on the prevention of mother-to-child transmission of hepatitis B and C; monitoring PrEP; guidance on prevention of STI, HIV and hepatitis among migrants (including recent migrants or refugees); advances in STI testing; and exploring the feasibility of promoting a standardised European survey on sexual health.

In addition, ECDC will aim to work very closely with colleagues in Member States and collaborate with partner agencies such as WHO, EMCDDA and other key stakeholders, including DG-SANTE, to explore needs, develop synergies, and minimise any duplication of efforts.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1, 2, 3 and 4
Objective 2019 – 1	Improve the current epidemiological understanding of HIV, hepatitis B and C, STIs, antimicrobial-resistant gonorrhoea and drug-resistant HIV to support more effective decision-making by Member States and the Commission.
Key outputs 2019	<ul style="list-style-type: none"> Improved quality of surveillance data (including data on drug-resistant HIV and antimicrobial resistance of gonorrhoea); surveillance systems consolidated and analysis methods improved (including modelling estimates) to produce better, more relevant outputs for effective decision-making. Alternative sources of data to better describe the burden of disease: clinical data; prevalence serosurveys; attributable mortality estimates and continue work to disseminate prevalence data through the online prevalence database. Country missions in response to specific requests by Member States to help improve the national HIV or hepatitis surveillance systems and strengthen their processes and expert capacity (Note: Can be deprioritised in case of emergency). Consultation and coordination of the HIV or hepatitis surveillance networks, with annual coordination committee meetings, and regular network meetings, in close collaboration with key stakeholders (Note: Can be deprioritised in case of emergency).
Expected results	<p>Better quality epidemiological data that more accurately reflect the true disease burden and the main determinants of HIV, hepatitis B and C, and possibly other STIs in the EU.</p> <p>More detailed and informative analysis for experts and policy advisors in the Member States to help improve national response and reduce the burden of HIV (including HIV drug resistance), hepatitis B and C, and possibly other STIs (including anti-microbial resistant gonorrhoea) at EU and national levels.</p> <p>Contribute to scientific excellence by strengthening the capacity of the public health workforce and associated networks.</p>

ECDC strategic objective	Strategic objectives 2, 7 and 8
Objective 2019 – 2	Strengthen international cooperation on HIV and Hepatitis B and C with relevant stakeholders to create synergies and improve efficiency ²⁵ .

²⁵ WHO, EMCDDA, UNAIDS, Civil Society Forum, US CDC, International AIDS Society, International Society for Sexually Transmitted Diseases Research, European Association For The Study Of The Liver, International Union against Sexually Transmitted Infections, International Association of Physicians in AIDS Care, AIDS Action Europe, European AIDS Treatment Group, among others.

ECDC strategic objective	Strategic objectives 2, 7 and 8
Key outputs 2019	<ul style="list-style-type: none"> Continuum-of-care estimates for HIV and hepatitis B and C, including key at-risk populations, in collaboration with WHO, EATG, EACS and EASL. Updated online European HIV/STI/HEP Test Finder, jointly with European Testing Week (Note: Can be deprioritised in case of emergency). Support to the international response by participation in major meetings or conferences organised by key partners; reciprocate invitations so that they participate in relevant ECDC conferences or meetings (Note: Can be deprioritised in case of emergency).
Expected results	<p>Enhance collaboration with clinical networks, learned societies and other key stakeholders. Broader support for ECDC activities from opinion leaders, influential organisations and leading societies.</p> <p>Strengthened collaboration on monitoring and surveillance activities with WHO, UNAIDS and EMCDDA.</p>

ECDC strategic objective	Strategic objectives 1, 2, 3, 4, 7 and 8
Objective 2019 – 3	Support the European Commission and the Member States through the provision of sound technical advice, relevant monitoring and evaluation; provision of evidence-based technical reports/guidance and training.
Key outputs 2019	<ul style="list-style-type: none"> Country missions with experts from WHO or EMCDDA to provide technical support to Member States on HIV and hepatitis issues (Note: Can be deprioritised in case of emergency). Reports on monitoring the response to HIV and hepatitis in Europe (including continuum-of-care estimates), focussing on sustainable development goals (SDGs), the Dublin Declaration and UN General Assembly commitments, in collaboration with WHO, EMCDDA and UNAIDS (including monitoring PrEP) (Note: Can be deprioritised in case of emergency). Technical reports and scientific guidance on topics identified by Member States and the Commission as priority areas (e.g. guidance on prevention of STI, HIV and hepatitis among migrants (including recent migrants or refugees), guidance on the prevention of mother-to-child transmission of hepatitis B and C, the impact of PrEP/PEP for STI, advances in STI testing, etc.).
Expected results	<p>Robust information on the response to HIV and hepatitis B and C at EU and national levels, integrating and harmonising the various sets of indicators.</p> <p>Reduced burden on Member States by avoiding the duplication of reporting with WHO and UNAIDS; better integrated reports monitoring the various Member State commitments.</p> <p>Clear evidence-based scientific advice and guidance for the European Commission and Member States to help improve the prevention and control of HIV, hepatitis B and C (and other STIs).</p>

ECDC strategic objective	Strategic objectives 2, 7 and 8
Objective 2019	Communicate better to distribute more widely the ECDC evidence-based reports and outputs; raise awareness, especially on HIV and hepatitis.
Key outputs 2019 - 4	<ul style="list-style-type: none"> All major technical outputs (including evidence briefs) include components to ensure that the evidence can be used to support efficient decision-making. World AIDS Day, World Hepatitis Day, European Testing Week and similar events supported with a variety of external communication activities and outputs (Note: Can be deprioritised in case of emergency). Participation at relevant expert meetings organised by key partners; presentation of ECDC output (Note: Can be deprioritised in case of emergency).
Expected results	<p>Better awareness by policy advisors, media and the general population of the epidemiological burden and issues relating to the prevention and control of HIV, STIs and hepatitis in the EU. Stronger support for ECDC activities from key stakeholders and influential opinion leaders in these diseases.</p>

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	85% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the HSH networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the disease programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources HSH:

Total FTEs for this activity: 8.78 FTEs

Total operational budget, Title 3: EUR 1 100 000

4.6.5 Influenza and other Respiratory Viruses – IRV

Seasonal influenza continues to have one of the highest morbidity and mortality impacts on the EU population. In addition, zoonotic influenza and other emerging respiratory viruses continue to threaten public health in unsuspected and unexpected ways. Strong (pandemic) preparedness at the level of surveillance, laboratory activities, and comprehensive actions in line with Decision 1082/2013/EU on serious cross-border threats to health is needed. The countries participating in the World Health Assembly have agreed to a Pandemic Influenza Preparedness Framework (WHA64.5), which obliges countries to share viruses with pandemic potential (important for ECDC work to support pandemic preparedness). In order to facilitate access to pandemic vaccines, the European Commission has launched a Joint Procurement mechanism for pandemic influenza vaccines under article 5 of Decision 1082/2013/EU.

Seasonal respiratory syncytial virus (RSV) epidemics are a significant cause of morbidity among infants in the EU. Several vaccine candidates are currently in phase II and III studies. In anticipation of the introduction of new EU/EEA vaccination programmes, Member State surveillance systems should be established in affected Member States to obtain baseline data for future impact assessments.

EU Member States have agreed to have strong influenza immunisation programmes for the elderly and risk groups²⁶. They also agreed on the importance of strong immunisation programmes in general²⁷.

Outbreaks caused by avian influenza viruses such as A(H5) and A(H7N9) also pose a threat to humans and demonstrate the importance of strong surveillance systems and scientific advice capacities for seasonal influenza and (re-)emerging respiratory viruses as well as the Middle East Respiratory Syndrome (MERS coronavirus, CoV). Monitoring the overall impact of seasonal, zoonotic and pandemic influenza, combined with a strong national reference laboratory network in the EU, is essential.

Given the nature of these diseases, international collaboration is vital, in particular with WHO/Europe, WHO Geneva and national CDCs. ECDC has the experience and capacity to upscale the monitoring of emerging viruses and produce timely assessments and options for risk management. Close collaboration with relevant Horizon 2020 projects, such as PREPARE on facilitating clinical research during pandemics, is anticipated. Close collaboration with relevant CHAFAEA projects, such as the Joint Action on vaccinations, and IMI projects, such as RESCEU on RSV disease burden and surveillance, is also anticipated. Cooperation with partners from the animal health sector is crucial in the timely sharing of information and facilitates capacity building.

²⁶ Council Recommendation of 22 December 2009 on seasonal influenza vaccination (2009/1019/EU)

²⁷ Council Conclusions on vaccinations as an effective tool in public health of 1 December 2014

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1, 3, and 9
Objective 2019- 1	Transform the European surveillance of influenza and other respiratory viruses, in collaboration with WHO/Europe, based on the outcome of the evaluation of the Disease Programmes, ECDC Data Quality Project, Surveillance Systems Re-engineering Project, and the Evaluations of EU/EEA Public Health Surveillance Systems (EPHESUS).
Key outputs 2019	<ul style="list-style-type: none"> • Proposal on revised influenza surveillance paradigm to European Influenza Surveillance Network²⁸. • Feasibility study on forecasting of yearly seasonal influenza epidemic (modelling). • Weekly high-quality and high-impact surveillance reports on FluNewsEurope.org during the season.
Expected results	Member States provided with high-impact and valuable influenza surveillance outputs, based on surveillance and mortality data. ECDC will continue to work in close collaboration with the WHO/Europe and WHO Headquarters, in order to add value for the Member States by continuing to develop a coherent system of European-wide surveillance of influenza.

ECDC strategic objective	Strategic objectives 5 , 6, and 7
Objective 2019 – 2	Enable early detection, monitoring, and scientific advice for zoonotic and other emerging respiratory viruses (including MERS-CoV and avian/swine influenza viruses).
Key outputs 2019	<ul style="list-style-type: none"> • Timely and high-quality risk assessment and scientific advice on emerging respiratory pathogens. • Relevant support to international outbreak assessment missions. • Publish quarterly ECDC/EFSA avian influenza reports.
Expected results	European Commission, EFSA, EMA and Member States provided with timely and valuable risk assessments and scientific advice with regard to emerging respiratory pathogens and outbreaks.

ECDC strategic objective	Strategic objectives 3 and 4
Objective 2019 – 3	Strengthen laboratory and surveillance capacity in the network through training and external quality assessment.
Key outputs 2019	<ul style="list-style-type: none"> • Online training and wet lab courses offered to Member State network members (Note: Can be deprioritised in case of emergency). • External quality assessment (EQA) for influenza laboratory specimens.
Expected results	Strengthened laboratory and network capacity through training and EQA activities.

ECDC strategic objective	Strategic objective 1 (health security area: improve vaccine coverage in the EU)
Objective 2019 – 4	Support Member State vaccination programmes by monitoring vaccination coverage ²⁹ (in coordination with WHO and the data collected in the Joint Reporting Form), vaccine effectiveness and safety signals, as well as communication campaigns ³⁰ .
Key outputs 2019	<ul style="list-style-type: none"> • Timely vaccine effectiveness estimates provided by Member State study sites through the I-Move project; vaccine coverage data available to stakeholders. • Expert meeting in support of Member States planning cost–benefit analyses of influenza vaccination programmes.
Expected results	Support to national vaccination programmes/strategies with evidence-based scientific advice and EU-level monitoring of influenza vaccine effectiveness and coverage. Strengthened and reinforced network of technical and communication experts working on vaccination programmes in the Member States, allowing the sharing of best practices in the area of addressing vaccination hesitancy.

²⁸ Based on the 2018 evaluation of the disease programmes, data quality evaluation in 2017, and the EPHESUS surveillance evaluation in 2018.

²⁹ Council Recommendation on seasonal influenza vaccination (2009/1019/EU)

³⁰ Council Conclusions on vaccinations as an effective tool in public health, 1 December 2014

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019 – 5	Support European Commission and the EU Joint Action on vaccinations (whenever requested), with a scientific evidence base for influenza and RSV vaccine-related work.
Key outputs 2019	<ul style="list-style-type: none"> • One literature review on a requested influenza or RSV vaccine-related topic. • Scientific advice on an ad hoc basis to EC and/or Joint Action. • Adequate evidence base for the EU joint procurement of pandemic influenza vaccines provided.
Expected results	Accelerated ramp-up of work and stronger evidence base on influenza and RSV vaccine-related work by the EC and EU Joint Actions.

ECDC strategic objective	Strategic objectives 1 and 3
Objective 2019 – 6	Monitor and strengthen pandemic preparedness in the EU by supporting the European Commission, the Health Security Committee, EU Member States, Pandemic Influenza Preparedness Framework and the Global Health Security Initiative Pandemic Influenza Working Group.
Key outputs 2019	<ul style="list-style-type: none"> • Assessment of preparedness through, for example, case studies, country visits, simulation exercises. • Scientific advice to HSC, SANTE C3, WHO, upon request. • Scientific support to EU joint procurement process, upon request. • Regional pandemic preparedness workshop/exercise.
Expected results	Enhanced pandemic preparedness in light of Decision 1082/2013/EU through tools and assessments for decision-making.

ECDC strategic objective	Strategic objective 1
Objective 2019 – 7	Support EU/EEA Member States in establishing surveillance of respiratory syncytial virus (RSV) surveillance
Key outputs 2019	<ul style="list-style-type: none"> • RSV surveillance protocol drafted (Note: Can be deprioritised in case of emergency). • Expert consensus meeting to agree on approaches to surveillance and case definitions (Note: Can be deprioritised in case of emergency).
Expected results	Common case definitions and surveillance approaches to RSV in anticipation of introduction of RSV vaccination programmes in EU/EEA Member States.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	To strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	87% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the IRV networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the Disease Programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources IRV:

Total FTEs for this activity: 5.75 FTEs

Total operational budget, Title 3: EUR900 000

4.6.6 Tuberculosis – TB

The EU Member States, EEA countries, candidate countries, potential candidate countries and European Neighbourhood Policy countries have different tuberculosis (TB) epidemiological profiles:

- medium and high burden of (drug-resistant) TB
- low burden (possible elimination of TB).

Thus, different approaches should be followed.

In low burden settings, people at risk for TB are often found in vulnerable populations which may be difficult to reach with the standard models of care. Also, TB in migrants/refugees contributes to the epidemiology.

In medium and high-burden settings, TB is more often found in the general population. Diagnosing and treating patients is the main public health strategy. This requires sufficient human and financial resources and innovative strategies that allow for early case finding and optimal treatment.

The World Health Organisation (WHO) started to implement the global End TB Strategy and the TB Action Plan for the WHO European Region 2016–2020. In the European Commission, there is an ongoing discussion on how to help the Member States reach the UN Sustainable Development Goals in the area of HIV, TB and hepatitis. Meanwhile, ECDC contributes to the following:

- Joint surveillance and monitoring of tuberculosis with WHO/Europe; improvement and standardisation of data collection of all diagnosed TB patients and individuals with latent TB infection, with a focus on drug resistance, treatment outcome results, molecular typing, and HIV co-infection.
- Adequate laboratory services which take into account the different country profiles and resources. To ensure quality and timely diagnosis for all, new diagnostic tests are explored, including those for rapid drug susceptibility; molecular typing will also be covered. In addition, the Centre will provide support for national reference laboratories. This requires assessments, trainings, and scientific advice in areas that Member States identified as priorities.
- Optimal TB prevention and control with a focus on vulnerable groups³¹ while taking into account the specific epidemiological profiles of Member States. This implies the prompt and adequate identification, diagnosis and treatment of all affected individuals, including individuals with drug resistant TB. In low-burden countries this may imply efforts to maintain the necessary knowledge and infrastructure.
- Scientific advice and guidance³² that supports Member States in TB prevention and control.

To assist Member States in the implementation of the WHO End TB Strategy and the TB Action Plan for the WHO European Region 2016–2020, as well as reaching the UN Sustainable Development Goals), ECDC will provide scientific advice and information (including surveillance and molecular typing data) to enable effective and evidence-based decision-making. ECDC will provide technical support tailored to the epidemiological profile of the Member States and offer training and/or exchange visits for persons involved in key strategic areas of TB prevention and control. ECDC will provide support to Member States with the standardisation of methods for whole genome sequencing of TB strains. ECDC will also collaborate with the TB Health Programme, in particular on TB standards of care, on the development of country strategies, and monitoring. The Centre will also support the policy work of the European Commission with timely and quality input.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 1, 2 and 3
Objective 2019 – 1	Strengthen TB (molecular typing) and LTBI surveillance at national and EU levels to reach an adequate coverage and completeness in order to inform TB prevention and control actions.
Key outputs 2019	Updated TB database that is analysed and reported on.
Expected results	Further harmonised and improved quality of TB surveillance at national and European levels.

³¹ Homeless people, people with drug or alcohol addiction, immunosuppressed individuals (particularly people living with HIV), prisoners or people with a history of imprisonment, some vulnerable migrant/refugee populations, and Roma populations.

³² Guidance: a document based upon a systematic review of scientific evidence and on the opinions of a panel of scientific experts appraising the evidence and providing a list of options with regard to the potential benefits, costs and harms of measures, areas and level of uncertainty and recommendations for future research.

ECDC strategic objective	Strategic objective 2, 3 and 4
Objective 2019 –2	Strengthen TB laboratory services: a) Improved management of TB so that all TB suspects are tested with tests that allow for adequate and rapid diagnosis, and all laboratory-confirmed TB cases are tested for drug resistance. b) Better detection and investigation of clusters with the use of adequate molecular typing methods.
Key outputs 2019	Strengthened European Reference Laboratories through implementation of the European Reference Laboratories Network for TB activities, including the annual meeting, training of laboratory experts, and external quality assessments.
Expected results	Improved laboratory services and processes for the management of TB cases and molecular typing for surveillance of TB.

ECDC strategic objective	Strategic objective 1, 2, and 4
Objective 2019 – 3	Support TB prevention and control efforts of Member States to progress towards ending TB.
Key outputs 2019	Country consultation visits for countries; training and/or exchange visits for persons involved in key strategic areas of TB prevention and control.
Expected results	Strengthened national TB control efforts.

ECDC strategic objective	Strategic objectives 1 and 2
Objective 2019- 4	Provide relevant scientific advice on TB prevention and control in support of the European Commission and the EU Member States.
Key outputs 2019	Timely and high-quality scientific advice in support of the work of the European Commission and the EU Member States, including support to the Commission for the Joint Procurement Procedures under Article 5 of Decision No 1082/2013/EU of the European Parliament and Council, in particular to the specific procurement procedure for BCG vaccines against tuberculosis.
Expected results	Evidence based decision-making by Member States on issues related to TB prevention and control.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	89% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the TB networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the Disease Programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources TB:

Total FTEs for this activity: 5.59 FTEs

Total operational budget, Title 3: EUR 735 000

4.6.6 Vaccine-Preventable Diseases – VPD

Although effective vaccination programmes continue to deliver fundamental public health benefits, a number of challenges remain to ensure the optimal prevention and control of vaccine-preventable diseases in EU Member States. Such challenges are complex and multi-faceted in nature, ranging from episodes of disease outbreaks for which effective, safe, and accessible vaccines exist, to budgetary pressures. There is a need for effective prioritisation in the decision-making process, for example with regard to the introduction and implementation of new vaccines or on data collection that can inform vaccination strategies. Changes to the demographic structure of the EU's population as a consequence of ageing, migration flows, and the shift in the burden of VPDs from childhood to later years of life, call for a life-course approach to vaccination. Vaccine shortages, and growing hesitant sentiment towards the value of vaccines from the general public and healthcare professionals risk to undermine the impact of immunisation programmes.

In the face of such challenges, ECDC will continue to develop and implement strategic activities with EU-added value in order to promote and support sustainable vaccine policies in the EU such as:

- providing technical guidance to set up electronic vaccination registries at the national and or subnational level;
- supporting decision-making processes at community and Member State level with regard to vaccine-preventable diseases by setting out evidence-based policy options for action;
- building trust in vaccination among healthcare workers and in the community;
- supporting Member States in increasing vaccine coverage and monitoring vaccine shortage.

The challenges and areas of work also call for strengthened synergies with WHO/Europe, for example support for the WHO EVAP³³ and the WHO *Global measles and rubella strategic plan*. ECDC will continue to help Member States improve measles and rubella surveillance as well as improve the quality and reliability of vaccine coverage data to drive progress towards the 2020 elimination targets. ECDC will also continue activities towards the polio eradication and endgame strategic plan, in close collaboration with WHO/Europe and WHO HQ, and will support Member States in strengthening their preparedness plans, AFP surveillance, environmental surveillance systems. The Centre will also support the development of poliovirus containment plans. Preparedness activities will support the implementation of EU Decision 1082/2013/EU.

ECDC will continue, together with the Member States, in setting up sensitive surveillance systems to effectively monitor the impact of vaccination, vaccine effectiveness and serotype replacement for priority diseases such as invasive pneumococcal disease (IPD) and pertussis.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1, 2, 3, 9
Objective 2019 – 1	Develop authoritative, relevant, and timely scientific and technical advice for effective policy- and decision-making on VPDs and immunisation, with a view to strengthening national immunisation programmes.
Key outputs 2019	Establish a formal collaboration with NFPs VPD in order to simplify, harmonise and streamline the production of scientific guidance; Set up a platform for sharing on going work in Member States that will be used as basis for NITAGs to provide recommendations to policymakers.
Expected results	Expanded scientific evidence and public health guidance on priority vaccines and vaccination strategies to inform national vaccination programmes and strategies.

ECDC strategic objective	Strategic objectives 1, 2, 3, 5, 9
Objective 2019 – 2	Harness the vast potential of eHealth to the benefit of immunisation, providing technical guidance and support to countries to improve the performance and monitoring of vaccination programmes.
Key outputs 2019	Country support to implement electronic Immunisation Information Systems.
Expected results	Integration of electronic immunisation information systems into broader eHealth strategies; increased implementation of immunisation information systems at country level.

³³ European Vaccine Action Plan 2015–2020

ECDC strategic objective	Strategic objectives 1, 2, 3, 5
Objective 2019 – 3	Sustain and strengthen EU-wide VPD epidemiological and laboratory surveillance as well as infrastructures for monitoring impact and effectiveness of priority vaccines/vaccination programmes.
Key outputs 2019	Contribution to Annual Epidemiological Report and to Atlas Surveillance of infectious diseases. Measles and rubella monthly monitoring. Hospital-based active surveillance for pertussis, IPD. EQAs, Twinning exchanges and training to build capacity for lab and molecular surveillance.
Expected results	Timely and targeted availability of data for action on VPDs, particularly with regards to diseases targeted for elimination and/or eradication, trends in Europe, risk of outbreaks. Evidence on the performance and effectiveness of vaccination programmes.

ECDC strategic objective	Strategic objectives 1, 2, 6, 9
Objective 2019 – 4	Continue to assess in close collaboration with the Member States most adequate tools and guidance to address the multi-faceted issue of vaccine hesitancy; in addition, effectively support national communications campaigns aimed to increase VCRs.
Key outputs 2019	Evidence and knowledge on determinants of hesitancy and interventions in response, including in collaboration with the WHO/Europe. Guidance toolkits for healthcare professionals and immunisation programme managers. Tools to strengthen national communications campaigns. European Immunisation Week 2019 activities in close collaboration with WHO/Europe.
Expected results	Strengthened evidence-base and coordination at EU level on approaches to tackle vaccine hesitancy, as well as improved communication on immunisation.

ECDC strategic objective	Strategic objectives 3, 4, 5, 6, 7
Objective 2019 – 5	Support the early detection and risk assessment for outbreaks, develop evidence to support the fight against diseases under elimination and eradication (measles, rubella, and polio) and build capacity and skills through training activities.
Key outputs 2019	Prioritise actions in support of measles and rubella elimination and polio eradication in close collaboration with WHO/Europe. Support Rapid Risk Assessments and Outbreak Response. Training on VPD Core Competences.
Expected results	Support to the implementation of EU Decision 1082/2013 as well as the EVAP 2020 and Polio Eradication and Endgame Strategy.

ECDC strategic objective	Strategic objectives 1, 8
Objective 2019 – 6	Provide scientific and technical advice to support programmes and activities on vaccination implemented by DG SANTE/CHAFEA/DG RESEARCH/EMA and other EU actors and provide timely response to ad hoc requests for scientific advice from Member States.
Key outputs 2019	Provide scientific and technical input or participate in key vaccine initiatives led by other EU actors (e.g. Joint Action on Vaccination, CHAFEA/DG RESEARCH-funded projects) Provide ad hoc response to unexpected requests for scientific advice from Member States.
Expected results	Integration and better coordination of public health aspects in activities on vaccination led by other key EU and national stakeholders.

ECDC strategic objective	Strategic objectives 7, 8
Objective 2019 – 7	Develop networks and strategic collaborations with institutional and non-institutional actors (e.g. professional, learned, scientific societies, civil society) to strengthen the role of ECDC in the area of vaccination, and to build alliances for effective advocacy on the value of vaccines
Key outputs 2019	Set-up of Technical Advisory Committee on communications and advocacy activities to increase VCR Engage with key stakeholders to improve support for vaccination (e.g. healthcare professional associations)
Expected results	Stronger and targeted partnerships on immunisation across actors

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
26	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthened Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Satisfaction by the Member States regarding the work of the Disease Programmes	83% (source: annual stakeholder survey 2015)	>75% satisfaction by two-third of the respondents	As measured by the VPD networks annual survey
27	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Strengthen Europe's defences against infectious diseases by dedicated programmes aiming at the best possible knowledge and implementation for prevention and control.	Added value of the Disease Programmes (as per periodical evaluation)	n/a	>75% satisfaction for the generic index, for each Disease Programme	Generic index based on the evaluation of the programme performed every five years (ongoing 2018–2021)

Total resources VPD:

Total FTEs for this activity: 14.71 FTEs

Total operational budget, Title 3: EUR 1 500 000

4.7. Management

4.7.1 General Management

The general management of the organisation requires cohesion. The main activities focus on cross-organisational issues like quality, project management and the implementation of the strategic multi-annual programme.

Dedicated efforts are made for the seamless communication with the Member States, the European Commission, particularly through the governing bodies (MB and AF) and the National Coordinators of the Coordinating Competent Bodies.

The reduction of the burden for the Member States will continue to be a main target. Smooth collaboration with the Member States will be facilitated by the CRM. Furthermore, ensuring the optimal allocation of resources is a priority.

The implementation of the Enterprise Architecture (EA) Framework will contribute to better internal cohesion and synergy by aligning the different processes and planning cycles in the Centre and by streamlining decisions on, for example, IT applications.

It is important that ECDC's products and communications are scientifically correct and impartial. As ECDC relies on many internal and external experts who shape the scientific position of ECDC, an Independence Policy is necessary to avoid conflicts of interest. In 2019, the emphasis will be on the timely and correct application of the policy. The review of the annual declarations of interest will be guided by the latest risk analysis for ECDC. This risk analysis also evaluate the proportionality of the resources involved.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 1	Ensure the seamless management and coordination of ECDC, its' efficacy and efficiency in implement the centre's missions, programme of activities, and internal processes in the most efficient way and foster its performance.
Key outputs 2019	<ul style="list-style-type: none"> • New long-term strategy for ECDC as from 2020. • Implementation of the recommendation from ECDC external evaluation 2013–2017. • Further implementation of an organisation-wide Enterprise Architecture framework. • Monitor the implementation of the SPD 2019. • All processes are simplified to efficiently support ECDC missions.
Expected results	The organisation and smooth general management of the Centre supports ECDC in implementing its missions, strategy and best adapt to its current and future challenges.

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 2	Apply the independence policy in a proportional manner to all meetings organised by ECDC.
Key outputs 2019	All Declarations of Interest timely checked, using an electronic submission and storage system.
Expected results	An efficient process is in place to prevent and address conflicts of interests.

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 3	Ensure seamless communication with the Member States and coordinate the smooth implementation of Governance meetings.
Key outputs 2019	Consolidated cooperation with the Member State. AF, MB and CCB meetings smoothly implemented.
Expected results	Enhanced cooperation with the Member State using the CRM system. AF, MB and CCB meetings and decisions are smoothly implemented to ensure a strong decision-making in the Centre.

ECDC strategic objective	Support to strategic objectives 1 to 6
Objective 2019 – 4	Strengthen transparency and accessibility to the information generated or held by ECDC in a secured way
Key outputs 2020	<ul style="list-style-type: none"> Enhanced knowledge sharing with decision makers and the general public, compliant with the legal frameworks and rights of third parties (data protection and Regulation 1049/2001). As part of ECDC Enterprise Architecture approach, operate the Information Architecture domain, coordinating all information management operations and new initiatives under the Information Governance Steering Committee (IGSC). Maintenance and improvement of information management policies and internal procedures to enable an efficient and transparent information access and retrieval. Effective operations enabling creation, distribution, retention and/or final disposition of information, in accordance with Council Regulation No 354/83, amended by CR (EU) 2015/496. Continue the implementation of General Data Protection Regulation (GDPR).
Expected results	A harmonised approach across the Centre to ensure transparency, collaboration and availability of information at all stages of its lifecycle, compliant with the legal frameworks and relevant policies, supporting ECDC activities and ensuring the independence of its scientific outputs.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
28	Provide scientific advice and authoritative information that enables effective decision-making by Member States and the European Commission.	Ensure timely ECDC input to EU policies in the remit of the Centre's mandate.	Number of EU policy documents for the preparation of which ECDC contributed	n/a	5	List monitored by the Chief Scientist
29	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Implement the independence policy of the agency.	Proportion of approved annual and specific declarations of interest for delegates to Governing Bodies, ad hoc scientific panels, invited experts and ECDC staff members before participation to the specified activities as defined in the policy, including Rapid Risk Assessments.	MB: 91% AF: 92% SMT: 100% External experts for RRA: 97% External experts at meetings: 98%	100%	Report from the compliance officer

4.7.2 Collaboration and cooperation

Based on its history and Founding Regulation, ECDC is, and operates as, a network organisation, the hub of an EU 'network of networks'. Most of the disease prevention and control resources ECDC draws on – including public health laboratories and many of the disease-specific experts – are located in the Member States' national public health institutes and associated academic environments. Connecting with experts and resources in the Member States is therefore a vital core task of ECDC. The Director's country visits are aimed at gaining a better understanding of the national public health situation and underlying policies and thus facilitate cooperation. The Centre's key partners in the Member States are the Coordinating Competent Bodies – ECDC's official national counterpart organisations, formally appointed by its Member State. ECDC also nurtures the relationship with its host country Sweden and with key stakeholders at the EU level, such as collaboration with the European Health Forum Gastein, EHFG.

The Centre collaborates closely with the EU family of institutions and organisations to ensure its actions are coherent with the EU's policy objectives. Its partner is the European Commission's Directorate-General for Health and Food Safety. The Centre also has contacts with other European Commission DGs, for example the Directorate-General Research and Innovation and the Directorate-General for Neighbourhood and Enlargement Negotiations (NEAR), as well as other EU agencies, most notably the European Food Safety Authority (EFSA) and the European Medicines Agency (EMA). These collaborations will be intensified and potential synergies with other agencies will be explored. ECDC is active in the Heads of Agencies Network and its subnetworks to conduct joint activities, work on common procedures and enable efficiency gains.

The European Parliament is also a partner for ECDC. The Director has an annual exchange of views with the Parliament's Committee for the Environment, Public Health and Food Safety (ENVI), presents the discharge of the Agency budget and submits annual written reports to its Committee for Budgetary Control (CONT). The Director also maintains regular contacts with the designated ENVI contact Member.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objective 2
Objective 2019 – 1	Invest in maintaining appropriate relationships with the European Parliament, in particular with the Committee for the Environment, Public Health and Food Safety (ENVI).
Key outputs 2019	<ul style="list-style-type: none"> • ECDC Director's annual exchange of views with the ENVI Committee of the European Parliament and, upon request, appearance before Parliamentary Committees. • Biannual invitation for a delegation from the EP Committee for the Environment, Public Health and Food Safety to visit ECDC. • Provision of scientific opinions as requested by EP. • Information of ECDC activities and of the Centre's disease specific areas in a format useful for making decisions.
Expected results	Continuous and smooth relationships with the European Parliament

ECDC strategic objective	Strategic objective 2
Objective 2019 – 2	Invest in maintaining and further enhancing the cooperation with our host country, Sweden, in particular through the designated contact person at the Swedish Ministry for Health and the ECDC liaison.
Key outputs 2019	<ul style="list-style-type: none"> • Actions as per the agreement regarding strategic co-operation between ECDC and the Swedish Government, represented by the Ministry of Health and Social Affairs. • Liaison on a regular basis with key persons at the Ministry of Health and Social Affairs (contact person, state secretary, minister). • Sharing of experiences, evidence and expertise with the Swedish authorities.
Expected results	Information about ECDC's mandate and activities and continuous and smooth relationships with our host country Sweden.

ECDC strategic objective	Strategic objective 2
Objective 2019 – 3	Invest in maintaining and further enhancing the cooperation with key stakeholders at the EU level.
Key outputs 2019	ECDC participation and interaction in the European Health Forum Gastein.
Expected results	Provide policymakers, public health professionals and NGOs with the scientific evidence for decision-making within the area of communicable diseases through organised events.

ECDC strategic objective	Strategic objective 2
Objective 2019 – 4	Further develop seamless, timely and efficient procedures for cooperation with the European Commission, in particular with a view to the practical consequences of Decision 1082/2013/EU.
Key outputs 2019	<ul style="list-style-type: none"> Strategic planning meeting with DG SANTE to align the work. Activities of ECDC support and complement the work of DG SANTE and CHAFAEA.
Expected results	Ensure strategic synergy with the European Commission.

ECDC strategic objective	Strategic objective 2
Objective 2019 – 5	Strengthen the existing collaboration with EU agencies through aligned planning, reporting, and monitoring of joint activities.
Key outputs 2019	Processes in place to ensure alignment of planning, reporting, and monitoring of joint work.
Expected results	ECDC's collaboration with other EU agencies adds to synergy visible in joint reports, assessments and projects.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
29	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Achieve of a high level of effective communication and coordination between ECDC and its Competent Bodies	Satisfaction of the Coordinating Competent Bodies on the communication with ECDC	91% (source: annual stakeholder survey 2015)	75 % satisfied with communication and coordination	Measure with dedicated survey
30	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Achieve successful meetings through the provision of enhanced and more cost effective organisational and substantive support.	Level of satisfaction of representatives of Member States in meetings.	n/a	75 % of questionnaires completed provided ratings for the organisation of the meetings of very good to excellent.	Measure to be integrated into the meeting satisfaction questionnaire

4.7.3 Resource management

Main areas of focus will continue to be EU-added value, return on investment, and delivering results. As a publicly funded independent agency of the European Union, ECDC will maintain a high level of budget execution, low vacancy rates and compliance with the rules and regulations that apply to ECDC activities. We will make sure that ECDC has the relevant competences to address current and future public health challenges. The Centre will therefore further strengthen its ability to adapt to evolving EU challenges and priorities, including the impact of Brexit. This will allow the Centre to better support and complement the European Commission and the Member States while remaining an attractive place to work also from staff well-being and gender-balance perspectives.

ECDC will continue to focus on performance management, continuous improvement, efficiency and effectiveness. The Centre will aim towards a lean and paperless organisation. All areas of resource management will continue to be scrutinised for simplification and effective support to the Centre's operations. ECDC will further enhance its internal performance and monitoring. This will be reflected in the Centre's key performance indicators related to budget and work programme implementation. This also relies on well-structured, clear, efficient, and aligned internal procedures and processes for administration and operations, with clear role definitions, electronic workflows, and paperless administration (eAdministration programme) that empower ECDC staff. The planning of meetings and business travel will benefit from more effective and integrated tools, as will procurement and grants management.

The objective will continue to be on value-added activities to free up time for scientific work. The development of ECDC capabilities under ECDC's Enterprise Architecture will continue to support the improvement of the Centre's overall consistency and coordination in the use of resources. We will continue to introduce best practices in management of the following areas: strategy implementation, organisation management and control, decision-making, and programme and project management. The areas of conflict of interests and transparency will continue to be a priority, in particular with the implementation of the General Data Protection Regulation (GDPR) and with regard to access to documents.

In its new facilities in Solna-Frösunda, ECDC will continue to explore new ways of working with the goal to strengthen and increase cooperation and collaboration. ECDC's new headquarters will certainly impact the Centre's culture and increase corporate and social responsibility. ECDC will also maintain and strengthen the security of staff and its ability to manage any emergency to ensure the business continuity of its operations at all time.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1 to 7
Objective 2019 – 1	Ensure efficient budget and financial management.
Key outputs 2019	<ul style="list-style-type: none"> • Provide the annual accounts of the Centre. • Ensure the preparation of draft, approved and amending budgets. • Perform financial initiation and ex-ante verification and Provide financial advice and support to all Units of the Centre.
Expected results	Improved efficiency and effectiveness of ECDC budget performance according to the ECDC Single Programming Document indicators.

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 2	Ensure that ECDC has adequate and effective staffing in order to enable ECDC to fulfil its strategic objectives.
Key outputs 2019	<ul style="list-style-type: none"> • Increased opportunities for scientific and non-scientific staff to develop and utilise their skills in the most effective ways; increase self-awareness of their roles and responsibilities; (Note: Can be deprioritised in case of emergency). • 'Field Deployment Support Programme' – supported by external expertise in preparing ECDC staff for field missions and upon return from the deployment. • Health and wellbeing support to staff in PHE operations and field deployments in cooperation with the medical and counselling service providers.
Expected results	Further acquisition and development of skills supporting the improvement of internal efficiency and boosting performance capabilities for both scientific and non-scientific staff. Relevant framework established to support ECDC staff in public health events (PHE) operations and in potential field deployments.

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 3	Ensure that ECDC has a continuous improvement approach to meet the objectives agreed with its partners and stakeholders.
Key outputs 2019	<ul style="list-style-type: none"> • Continuous improvement culture based on Lean, Enterprise Architecture, Information management, project management to increase quality outputs, efficiency, free up staff time and improve decision-making. • eAdministration programme as a unique continuous improvement frame for all administrative process automation related initiatives in close collaboration with the European Commission. • Operate within ECDC new premises, in a healthy and highly collaborative environment including business continuity and crisis management plans fully operational.
Expected results	Essential services and processes consolidated and further optimised (e.g. excellence in the operations of Finance, Procurement, Missions and Meetings, Business Continuity). Business travel and meetings organisation workflows fully integrated to the Centre's e-Administration framework programme, including travellers' bookings and submissions. Secured healthy workplace, that foster staff wellbeing and consolidates ECDC foundations for a more efficient, collaborative and secure environment.

ECDC strategic objective	Support to strategic objectives 1 to 7
Objective 2019 – 4	Further ensure that ECDC has an efficient management and operating model, and improve performance.
Key outputs 2019	<ul style="list-style-type: none"> • Management and operating model that ensure that ECDC's day to day activities are aligned with ECDC's strategic priorities through the development of the ECDC Enterprise Architecture. • Improved reports on ECDC's annual work programme performance towards its expected results, to allow better support to successful activities and propose redirection of ineffective budget allocations. • Early strategic assessment of the procurement needs, at planning stage of the Single Programming Document. • System of cascading performance indicators starting with KPIs in the Single Programming Document, complemented by more operational indicators at the level of each area of work.

ECDC strategic objective	Support to strategic objectives 1 to 7
Expected results	ECDC strategic objectives implemented in a coherent and efficient way. Focused on timely and measurable outputs, products & services, through efficient processes, strong quality and project management culture; Reduced number of procurement procedures. Improved planning, monitoring and reporting of ECDC's annual work programme performance.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
31	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Ensure best use of financial resources, timely correlated to the implementation of activities of the work programme.	<ul style="list-style-type: none"> Percentage of budget committed (C1) and percentage of payments executed (C1) in the same year as the commitment Percentage of invoices paid within the time limits of the ECDC Financial Regulation Rate of cancellation of payment appropriations Rate of outturn 	99.8% committed 81.7 paid 87% 1.57% 1.95%	100% committed 80% paid minimum 95% 2% 5%	Annual accounts Total payments in year N and carry-forwards to Year N+1, as a % of the total EU funding and fee income, where applicable, received in Year N.
32	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Implement the annual work programme.	Proportion of activities implementation of the Annual Work Programme	90%	85%	Verified via ECDC Management Information System
33	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Ensure swift and timely fulfilment of the Agency's establishment plan correlated to the implementation of activities of the work programme.	<ul style="list-style-type: none"> Average vacancy rate Percentage of staff satisfaction/ engagement Average recruitment time 	2% 52% (2016) 8.7 weeks	5% 75% 12 weeks as from the vacancy notice deadline	% of authorised posts of the annual establishment plan which are vacant at the end of the year, including job offers sent before 31st December. ECDC biannual staff survey
34	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Timely improve the adequacy and effectiveness of internal control systems.	Rate (%) of external and accepted internal audit recommendations implemented within agreed deadlines (excluding 'desirable')*	22% (2 out of 9 recommendations implemented within originally agreed timeline.	90%	Internal control reporting to SMT.

Total General Management and Resources Management:

Total FTEs for this activity: 78.3 FTEs

Total operational budget, Title 3: EUR 628 930

4.8 Information and Communication Technology

Information and Communication Technologies (ICT) are a critical service for ECDC. There are two key objectives:

- Enable ECDC's mission by efficiently and effectively supporting the Centre's ICT needs for internal, European Commission and Member State users.
- Enable ECDC to continue improving the suitability, sustainability and best value for money of products and services.

The implementation of the 'IT Target Operating Model 2020' will strongly impact IT-related activities. The Operating Model stipulates that IT services and products must be handed over to new external service providers by 2020. This will require a significant effort from the ICT team. While existing core IT activities and IT products will continue to be maintained, other activities will be reduced. This investment into the new sourcing model is expected to yield gains as early as 2020.

ECDC's ICT team delivers a number of services that cover business support, software development, hardware and infrastructure management.

In fulfilling its core functions (surveillance, epidemic intelligence and response), the Centre acts as a hub in a network of intensive daily interaction between ECDC and its partners. The end users of the IT solutions and services are both internal (ECDC end users) and external (Member State contact points, laboratories, European Commission, general public), for whom ECDC provides assistance and technical support.

It is also ECDC's legal duty to operate EU's Early Warning and Response System (EWRS) on public health threats. Regular maintenance and further evolution of this and other critical solutions and services (TESSy, EPIS, ECDC web portal) are vital investments for enabling ECDC core missions.

The ICT unit will continue to maintain the high reliability of IT systems, ensuring that the necessary infrastructure is in place. This includes a reliable data centre, data communications, overall security, business continuity capabilities, as well as a disaster recovery site (under agreement with EASA).

In connection to the ninth strategic objective, ECDC will monitor and assess new technologies like whole genome sequencing, e-health, metagenomics, big data, IT technologies for citizen-based surveillance of communicable diseases, crowdsourcing, mobile apps, blockchain, and green IT. This will allow the Centre to explore new technologies in order to develop new capabilities and reap benefits from these technologies for the application in the field of communicable disease prevention and control.

Table. Objectives, key outputs 2019, and expected results

ECDC strategic objective	Strategic objectives 1 to 8
Objective 2019 – 1	Enable ECDC operations by maintaining high availability of IT services (dedicated applications, databases, web portal) in regards to enterprise infrastructure services.
Key outputs 2019	Maintained and secure infrastructures and applications, hosted as per SLA requirements.
Expected results	ECDC operations maintained according to the needs. Smooth migration and stabilisation of ICT services in the new externalised FWC contract.

ECDC strategic objective	Strategic objectives 1 to 8
Objective 2019 – 2	Develop new systems according to the annual work programme and maintain the existing products for ensuring their reliability, their need to meet evolving business needs and the need to be kept interoperable with other systems overtime.
Key outputs 2019	<ul style="list-style-type: none"> • New systems developed as per ICT work plan commitments. • Existing solutions maintained as per ICT work plan commitments (Note: Can be deprioritised in case of emergency).
Expected results	Reliable IT solutions meeting the business needs. Developed new core-business and administrative solutions.

ECDC strategic objective	Strategic objectives 1 to 8
Objective 2019 – 3	IT Strategy 2020 (phase 2019) implemented.
Key outputs 2019	<ul style="list-style-type: none"> • IT Quality Management aligned with Enterprise Quality Management function. • Established processes evaluated, measured and improved. • IT Security function strengthened. • Functional Architecture (based on the interaction, insight, support and integration domains) defined.

ECDC strategic objective	Strategic objectives 1 to 8
Expected results	<ul style="list-style-type: none"> • Further improved IT Security. • Organisational wide alignment on functional architecture. • Positive trend in defined key quality measurements.

ECDC strategic objective	Strategic objectives 1 to 8
Objective 2019 – 4	IT Target Operating Model (phase 2019) implemented.
Key outputs 2019	<ul style="list-style-type: none"> • IT product maintenance activities (in scope) migrated (initiated) to external provider. • ECDC mid-term consultancy approach implemented (Note: Can be deprioritised in case of emergency).
Expected results	<ul style="list-style-type: none"> • External service providers enabled to deliver IT services to ECDC. • All IT product maintenance activities harmonised across ECDC.

ECDC strategic objective	Strategic objective 9
Objective 2019 – 5	New IT trends and technologies identified, assessed, piloted, and implemented.
Key outputs 2019	<ul style="list-style-type: none"> • Technology watch reports (Note: Can be deprioritised in case of emergency). • Cloud services acquired.
Expected results	New IT trends and technologies identified and assessed. Cloud services piloted and tested

ECDC strategic objective	Strategic objective 1 to 9
Objective 2019 – 6	Develop a continuous improvement plan for IT according to ECDC expected benefits, capacity and annual work plan.
Key outputs 2019	IT continuous quality improvement plan defined for 2019 and actions implemented (Note: Can be deprioritised in case of emergency).
Expected results	Continuous quality improvement maintained.

Table. Indicators

	Multi-annual strategic objective	Objective	Indicator	Baseline 2017	Target 2019	Verification
35	Further improve efficiency and further clarify responsibilities in close cooperation with relevant stakeholders, while retaining control over quality and service delivery.	Ensure agencies operations by maintaining constant availability of IT services elements to ensure a smooth running of the Centre's activities (dedicated applications, databases, web portal).	<p>Performance of ICT services: Availability of hosted applications under service level agreement (SLA)</p> <p>Proportion of ICT Front-Office requests and incidents resolved as per SLA.</p> <p>Compliance with predefined product acceptance criteria</p>	<p>26/28 infrastructure services and backend systems and 24/28 applications had a uptime of 100%; lowest uptime: 99.86%</p> <p>98.1% of requests 94.4% of incidents</p> <p>88% compliance (as from 01/07)</p>	<p>99% each</p> <p>90% of requests and 90% of incidents</p> <p>> 80 % of all products are compliant</p>	<p>ICT statistics: verified by regular monitoring reports</p> <p>ICT statistics: number of critical/high severity defects found in Production.</p> <p>Criteria defined in the 'IT product quality acceptance criteria' (doc. SMT 194/7)</p>

Total resources ICT:

Total FTEs for this activity: 34.88 FTEs

Total operational budget, Title 3: EUR 4 809 000

Annex 1. Resource allocation

Resource allocation per activity, N+1 – N+3

The resource allocation split by activities of the Centre is a provisional estimation based on figures from 2019.

	2019		2020		2021	
1. Surveillance and epidemic intelligence	37.3	5 926 195	33.7	6 191 492	33.7	6 191 492
2. Scientific support (including microbiology)	22.2	3 549 777	19.0	3 550 639	19.0	3 550 639
3. Preparedness and response	15.0	2 325 222	8.6	1 799 574	8.6	1 799 574
4. Training and capacity building	26.5	6 975 345	23.7	7 668 313	23.7	7 668 313
5. Communication (including <i>Eurosurveillance</i>)	34.4	3 906 811	22.4	3 645 680	22.4	3 645 680
6. Disease programmes	84.0	16 759 822	65.2	16 189 604	65.2	16 189 604
7. Management and support	60.5	19 462 829	73.0	15 224 404	73.0	15 224 404
8. Cross-organisational projects	-	-	10.0	2 779 179	10.0	2 779 179
9. Neutral category as per benchmarking	24.4	2 921 911	24.4	3 409 116	24.4	3 409 116
Grand total	280	59 206 000	280	60 458 000	280	60 458 000

Annex 2. Human and financial resources, N+1 – N+3

Table. Expenditures

Expenditures	N (2018)		N+1 (2019)	
	Commitment appropriations	Payment appropriations	Commitment appropriations	Payment appropriations
Title 1	31 471 000	31 471 000	31 384 000	31 384 000
Title 2	8 207 000	8 207 000	7 362 000	7 362 000
Title 3	18 352 000	18 352 000	20 460 000	20 460 000
Total expenditure	58 030 000	58 030 000	59 206 000	59 206 000

Expenditures	Commitment and payment appropriations						
	Executed Budget N-1 (2017)	Budget N (2018)	Draft Budget N+1 (2019)		VAR N+1 (2019)/N (2018)	Envisaged in N+2 (2020)	Envisaged N+3 (2021)
			Agency request	Budget Forecast			
Title 1							
Staff expenditures	31 003 119	31 471 000	31 384 000		-0.2%	31 500 000	31 500 000
11 Salaries & allowances	27 314 315	27 916 000	27 865 000			27 955 000	27 955 000
• of which establishment plan posts	20 614 980	21 490 000	21 130 500			21 522 326	21 522 326
• of which external personnel	6 699 335	6 426 000	6 735 500			6 432 674	6 432 674
12 Expenditure relating to Staff recruitment	444 482	380 000	375 000		-1.3%	460 000	460 000
13 Mission expenses	585 369	700 000	660 000		-5.7%	700 000	700 000
14 Socio-medical infrastructure	90 190	170 000	170 000			170 000	170 000
15 Training	363 811	400 000	400 000			400 000	400 000
16 External services	2 182 072	1 860 000	1 874 000			1 775 000	1 775 000
17 Receptions and events	22 880	45 000	40 000		-11.1%	40 000	40 000
Title 2							
Infrastructure and operating expenditure	8 976 803	8 207 000	7 362 000		-10.3%	7 680 000	7 680 000
20 Rental of buildings and associated costs ³⁴	3 743 296	3 281 100	3 913 000		+19.2%	3 700 000	3 700 000
21 Information and communication technology	3 577 797	2 557 800	2 262 000		-11%	2 800 000	2 800 000
22 Movable property and associated costs	1 103 891	593 100	118 000		-80%	130 000	130 000
23 Current administrative expenditure	133 663	780 000	240 000		-69.2%	300 000	300 000
24 Postage/Telecommunications	130 316	245 000	218 000		-11%	250 000	250 000
25 Meeting expenses	287 840	750 000	611 000		-18.5%	500 000	500 000
26 Running costs in connection with operational activities							
27 Information and publishing							

³⁴ Including possible repayment of interest; detailed information as regards building policy provided in Annex 3

Expenditures	Commitment and payment appropriations						
	Executed Budget N-1 (2017)	Budget N (2018)	Draft Budget N+1 (2019)		VAR N+1 (2019)/N (2018)	Envisaged in N+2 (2020)	Envisaged N+3 (2021)
			Agency request	Budget Forecast			
28 studies							
Title 3	17 934 845	18 352 000	20 460 000		+11.4%	21 278 000	21 278 000
Operational expenditure							
to be specified by chapter		18 352 000	20 460 000			21 278 000	21 278 000
TOTAL EXPENDITURE	57 914 767	58 030 000	59 206 000			60 458 000	60 458 000

Table. Details, Title 3 by budget line

Budget Line	DIR	ICT	*ARHAI	OCS	*EVD	*FWD	*HASH	*RTI/FLU	*RTI/TB	*VPD	PHC	RMC	SRS	Total
3000 - Surveillance													1 417 500	1 417 500
3001 - Epidemic intelligence and response													275 500	275 500
3002 - Scientific advice (including microbiology support)			1 400 000	1 036 000	780 000	700 000	1 100 000	900 000	735 000	1 480 000		500 000	40 000	8 671 000
3003 - Public Health Training										-	3 972 000			3 972 000
3004 - Health Communication										20 000	450 000			470 000
3005 - Public Health Informatics		4 809 000											131 670	4 940 670
3006 - Preparedness											450 000			450 000
3007 - Eurosurveillance												29 400		29 400
3009 - Consultation and (country) cooperation	233 930										-			233 930
Total	233 930	4 809 000	1 400 000	1 036 000	780 000	700 000	1 100 000	900 000	735 000	1 500 000	4 872 000	529 400	1 864 670	20 460 000

Abbreviations*DIR: Director's Office**ICT: Information and Communication Technologies**ARHAI: Antimicrobial Resistance and Healthcare-associated Infections**OCS: Office of the Chief Scientist**EVD: Emerging and Vector-borne Diseases**FWD: Food- and Waterborne Diseases**HASH: HIV, Sexually Transmitted Infections and Viral Hepatitis**IRV: Influenza and other Respiratory Viruses**RTI/TB: Tuberculosis**VPD: Vaccine-preventable Diseases**PHC: Public Health Communication**RMC: Resource Management and Coordination**SRS: Surveillance and Response Support***Table. Activity-Based Budget 2019**

Strategic activity, actions, expenses and resources	Sum of FTE benchmarking methodology	Sum of budget T1 benchmarking	Sum of budget T2 benchmarking	Sum of budget T3	Sum of total budget
1. Surveillance and epidemic intelligence	37.3	3 540 246	721 778	1 664 170	5 926 195
1.1 Surveillance	25.1	2 422 701	484 538	1 549 170	4 456 410
1. Public health surveillance	0.8	119 136	16 307	311 000	446 442
2. Molecular surveillance	3.3	357 393	64 623	154 000	576 016
3. Methods to support disease prevention and control	8.6	977 719	165 845	1 084 170	2 227 734
4. Management and administrative support	12.3	968 454	237 763	-	1 206 218

Strategic activity, actions, expenses and resources	Sum of FTE benchmarking methodology	Sum of budget T1 benchmarking	Sum of budget T2 benchmarking	Sum of budget T3	Sum of total budget
1.2 Epidemic intelligence	12.3	1 117 545	237 240	115 000	1 469 785
1. Epidemic intelligence	11.7	1 042 668	225 161	115 000	1 382 829
2. Rapid assessment of public health events	0.6	74 877	12 079	-	86 956
2. Scientific support (including microbiology)	22.2	2 084 158	429 619	1 036 000	3 549 777
2.1 Scientific Advice	18.3	1 627 926	352 987	850 000	2 830 913
1. Scientific advice coordination	3.2	346 565	61 482	842 000	1 250 047
2. Research coordination and studies	0.3	49 900	6 523	-	56 423
3. Scientific liaison activities	0.6	71 882	11 596	8 000	91 478
4. Management and administrative support	14.1	1 159 580	273 386	-	1 432 965
2.2 Microbiology	4.0	456 232	76 632	186 000	718 864
1. Microbiology support	4.0	456 232	76 632	186 000	718 864
3. Preparedness and response	15.0	1 384 637	290 084	650 500	2 325 222
3.1 EU and country preparedness support	6.9	631 122	132 510	450 000	1 213 632
1. Country preparedness	3.2	317 761	62 086	450 000	829 847
2. Management and administrative support	3.6	313 361	70 423	-	383 785
3.2 Response	8.2	753 515	157 575	200 500	1 111 590
1. Support to EU outbreaks	1.1	118 982	20 414	105 000	244 396
2. Emergency operations	4.3	486 455	83 104	95 500	665 059
3. Management and administrative support	2.8	148 078	54 057	-	202 135
4. Training and capacity building	26.5	2 386 826	511 519	4 077 000	6 975 345
4.1 Training	17.9	1 623 957	346 441	3 972 000	5 942 398
1. Fellowships EUPHEM -EPIET	8.5	849 422	163 309	3 492 000	4 504 730
2. Training networks	2.9	367 033	55 322	380 000	802 355
3. e-learning	1.3	152 749	24 641	100 000	277 391
4. Management and administrative support	5.0	211 928	97 371	-	309 298
5. MediPiet	0.3	42 826	5 798	-	48 624
4.2 Coordinated Country support	1.2	137 476	23 628	-	161 104
1. Coordinated Country Support	1.2	137 476	23 628	-	161 104
4.3 International Relations	7.3	625 393	141 450	105 000	871 843
1. Cooperation with the World Health Organisation (WHO)	0.4	50 727	7 489	5 000	63 216
2. Working with non-EU countries	3.5	396 758	68 488	100 000	565 247
3. Management and administrative support	3.4	177 908	65 473	-	243 380
5. Communication	34.4	2 761 972	665 440	479 400	3 906 811
5.1 Health communication	27.2	2 209 021	526 225	450 000	3 185 245
1. Press media and Information services	2.1	212 715	39 619	165 000	417 334
2. Editorial services	5.1	450 634	97 599	105 000	653 233
3. Web portal and extranets	2.5	218 293	48 316	-	266 609
4. Translations	0.3	26 495	4 832	80 000	111 326
5. Country support on risk communication	0.6	53 214	10 630	-	63 844
6. Stakeholders and networking	2.7	284 872	52 182	100 000	437 053
7. Management and administrative support	12.3	815 567	237 294	-	1 052 860
8. Internal communication	1.9	147 232	35 754	-	182 986
5.2 Eurosurveillance	7.2	552 951	139 215	29 400	721 566
1. Eurosurveillance	5.2	460 981	99 531	29 400	589 912
2. Management and administrative support	2.1	91 970	39 684	-	131 653
6. Disease Programmes	84.0	8 021 339	1 623 483	7 115 000	16 759 822
6.0 Disease Programmes: General support	20.4	412 531	395 163	-	807 695
6.1 ARHAI: Antimicrobial resistance and healthcare-associated infections	13.8	1 800 199	266 706	1 400 000	3 466 904
6.2 EVD: Emerging and vector borne diseases	5.9	697 547	114 751	780 000	1 592 298
6.3 FWD: Food- and Waterborne Diseases and Zoonoses	9.0	1 080 627	173 576	700 000	1 954 203
6.4 HSH: HIV Sexually Transmitted Infections and viral Hepatitis	8.8	1 004 868	169 711	1 100 000	2 274 579

Strategic activity, actions, expenses and resources	Sum of FTE benchmarking methodology	Sum of budget T1 benchmarking	Sum of budget T2 benchmarking	Sum of budget T3	Sum of total budget
6.5 IRV: Influenza and other Respiratory Viruses	5.8	720 071	111 127	900 000	1 731 198
6.6 TB: Tuberculosis	5.6	669 208	108 108	735 000	1 512 316
6.7 VPD: Vaccine Preventable Diseases	14.7	1 636 288	284 341	1 500 000	3 420 629
7. Management	36.1	8 454 477	2 648 511	5 437 930	16 540 918
7.1 General management	1.1	835 141	190 534	60 000	1 085 675
1. Strategic Advice	0.1	100 808	1 208	-	102 016
2. Organisation Governance meetings	0.0	158 802	170 000	60 000	388 802
3. Management and administrative support	1.0	575 531	19 326	-	594 857
7.2 Collaboration and cooperation	0.0	292 304	140 500	68 930	501 734
1. ECDC in the 'family' of European Institutions and Bodies	0.0	254 483	140 500	68 930	463 913
2. Working with the European Union Member States	0.0	37 821	-	-	37 821
7.3 Resource management	27.4	3 999 989	1 511 596	500 000	6 011 585
1. Human Resources	12.3	1 226 602	287 716	-	1 514 317
2. Finance and Accounting	0.0	-	187 725	-	187 725
3. Legal and procurement	1.6	680 240	60 922	-	741 162
4. Quality management project management and planning	0.0	210 674	265 000	-	475 674
5. Internal Control	1.0	188 650	64 326	-	252 976
6. Internal and corporate Communication and Knowledge Services	4.9	441 658	499 025	500 000	1 440 682
7. Corporate Services	4.0	755 180	77 306	-	832 486
8. Management and administrative support	3.6	496 986	69 575	-	566 562
7.4 ICT	7.6	3 327 043	805 881	4 809 000	8 941 924
1. Software services	1.1	1 278 040	401 154	2 513 239	4 192 433
2. Hosting operating maintenance administration and security of applications and infrastructures	6.3	1 076 939	136 757	2 285 366	3 499 062
3. Business support	0.0	203 102	33 679	10 395	247 175
4. Management and administrative support	0.1	768 962	234 291	-	1 003 254
8. Benchmarking	24.4	2 450 345	471 566	-	2 921 911
8.0 Neutral category as per benchmarking methodology	24.4	2 450 345	471 566	-	2 921 911
Neutral category as per benchmarking methodology	24.4	2 450 345	471 566	-	2 921 911
4228-1. Human Resources (benchmarking)	0.7	65 386	13 529	-	78 914
4229-2. Finance and Accounting (benchmarking)	15.0	1 520 298	289 897	-	1 810 196
4230-3. Legal and procurement (benchmarking)	4.0	343 166	77 306	-	420 472
4233-6. Internal and corporate Communication and Knowledge Services (benchmarking)	0.0	-	-	-	-
4234-7. Corporate Services (benchmarking)	1.8	163 806	34 788	-	198 594
4235-8. Management and administrative support (benchmarking)	0.5	42 622	9 663	-	52 285
Grand total	280.0	31 084 000	7 362 000	20 460 000	58 906 000
SNEs		300 000			300 000
TOTAL	280.0	31 384 000	7 362 000	20 460 000	59 206 000

* Note: Figures for FTEs in this table include the operational support from administrative staff, as per the benchmarking methodology agreed with the European Commission and used in all agencies; therefore, the numbers in this table may differ from what is presented in the document under each strategy where only FTEs allocated to the Units are counted.

Table. Revenue

Revenue	N (2018)	N+1 (2019)
	Revenues estimated by the agency	Budget forecast
EU contribution	56 766 000	57 833 122
Other revenue	1 264 000	1 373 443
Total revenue	58 030 000	59 206 000

Revenues	N-1 (2017)	N (2018)	N+1 (2019)		VAR N+2 (2020) /N+1 (2019)	Envisaged N+2 (2020)	Envisaged N+3 (2021)
	Executed budget	Revenues estimated by the agency	As requested by the agency	Budget forecast			
1 REVENUE FROM FEES AND CHARGES							
2 EU CONTRIBUTION	56 640 927	56 766 000	57 833 122			59 059 000	59 059 000
of which Administrative (Title 1 and Title 2)	39 100 561	38 924 446	38 227 692			39 180 000	39 180 000
of which Operational (Title 3)	17 540 366	17 841 554	19 605 430			19 879 000	19 879 000
of which assigned revenues deriving from previous years' surpluses	0	2 638 000	1 079 296				
3 THIRD COUNTRIES CONTRIBUTION (incl. EFTA and candidate countries)	1 273 840	1 264 000	1 373 443			1 399 000	1 399 000
of which EFTA		1 264 000	1 373 443			1 399 000	1 399 000
of which Candidate Countries							
4 OTHER CONTRIBUTIONS							
of which delegation agreement, ad hoc grants							
5 ADMINISTRATIVE OPERATIONS							
6 REVENUES FROM SERVICES RENDERED AGAINST PAYMENT							
7 CORRECTION OF BUDGETARY IMBALANCES							
TOTAL REVENUES	57 914 767	58 030 000	59 206 000			60 458 000	60 458 000

Table. Budget outturn and cancellation of appropriations; calculation budget outturn

Budget outturn	N-4* (2015)	N-3* (2016)	N-2* (2017)
Revenue actually received (+)	59 182 000	58 439 000	58 553 000
Payments made (-)	45 002 000	46 591 000	47 792 000
Carry-over of appropriations (-)	11 116 000	11 328 000	10 986 000
Cancellation of appropriations carried over (+)	1 254 000	1 231 000	953 000
Adjustment for carry-over of assigned revenue appropriations from previous year (+)	495 000	721 000	402 000
Exchange rate differences (+/-)	+266 000	+166 000	-51 000
Adjustment for negative balance from previous year (-)	0		
Total	5 079 000	2 638 000	1 079 000

* N – the year covered by the programming document drafted in N-1

Budget outturn

2017 surplus that should be reimbursed to the EU budget (as assigned revenue): EUR 1 079 296.82

The Centre spent its budget of EUR 58 042 653 in 2017.

The expenditures of 2017, including the carry-forward to 2018, amounted to EUR 58 778 561.21

The amount of cancelled, unused payment appropriations carried forward from the previous year (EUR 953 754.87), the adjustment for carry-over from the previous year of appropriations available at 31 December arising from assigned revenue (EUR 402 187.11) and the exchange rate loss for 2017 (EUR -50 864.22) have resulted in a positive budget outturn in 2017.

In 2017, ECDC posted a positive budgetary balance from 2016, which amounted to EUR 2 638.822,59.

As a result of the above, EUR 1 079 296.82 had to be reimbursed to the EU budget (as assigned revenue) in 2018, related to the Centre's 2017 budget.

Cancellation of commitment appropriations

The total implementation of commitment appropriations for ECDC in 2017 reached 99.78%, with a total of only EUR 127 885.27 cancelled for all three Titles, compared to EUR 1 152 925.78 cancelled in 2016. As a result, ECDC had a significantly increased budget implementation in 2017 and therefore the reductions of the EU contribution of 2% for the implementation of commitment appropriations and 2% for the cancellation of payment appropriations are not applicable for 2019. The commitment of appropriations for the operational expenditure on Title 3 reached 99.64% in 2017.

Cancellation of payment appropriations for the year

See 'cancellation of commitment appropriations'.

Cancellation of payment appropriations, payment appropriations carried over

The Centre has carried forward EUR 10 926 185.26 from 2016 to 2017, of which EUR 9 972 430,39 was paid (fund source C8). This corresponds to 91.27% of the amount carried forward.

Annex 3. Staff

Table. Staff; overview of all categories

Staff population		Actually filled as of 31 December 2016 ³⁵	Authorised under EU budget 2017	Actually filled as of 31 Dec 2017 ³⁶	Authorised under EU budget for year 2018	Draft budget for 2019	Envisaged in 2020	Envisaged in 2021
Officials	AD							
	AST							
	AST/SC							
TA	AD	111	127	124	126	126	126	126
	AST	54	55	52	52	52	52	52
	AST/SC			2	2	2	2	2
Total		165	182	178	180	180	180	180
CA GF IV		49	50	48	50	50	50	50
CA GF III		37	38	36	36	36	36	36
CA GF II		9	10	12	12	12	12	12
CA GF I		2	2	2	2	2	2	2
Total CA		97	100	98	100	100	100	100
SNE		3	5	3	5	5	5	5
Structural service providers		15		16				
Total		280		295				
External staff for occasional replacement		34		36				

Table. Multi-annual staff policy plan Year N+1-Year N+3

Category and grade	Establishment plan in EU Budget 2017		Filled as of 31/12/2017 ³⁷		Modifications in year N-1 in application of flexibility rule		Establishment plan in voted EU Budget 2018		Modifications in year N in application of flexibility rule		Establishment plan in Draft EU Budget 2019		Establishment plan 2020		Establishment plan 2021	
	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA
AD 16																
AD 15		1						1				1		1		1
AD 14		5		1				5				2		2		2
AD 13		10						5				3		3		3
AD 12		12		5				10				7		7		7
AD 11		18		3				10				8		8		8
AD 10		24		9				25				23		23		23
AD 9		25		12				25				24		24		24
AD 8		18		36				20				22		22		22
AD 7		13		7				26				26		26		26
AD 6		1		17								10		10		10
AD 5				34												
Total AD		127		124				126				126		126		126
AST 11		2														
AST 10		4						2				1		1		1
AST 9		4						2				2		2		2

³⁵ Posts filled at 31 Dec 2016 include 5 offers made and accepted (3 AD, 1 CA IV, 1 CA III).

³⁶ Posts filled at 31 Dec 2017 include 13 offers made and accepted (8 AD, 4 AST, CA IV).

³⁷ Posts filled at 31 Dec 2017 include 12 offers made and accepted (1 AD10, 2 AD8, 5 AD5, 4 AST4)

Category and grade	Establishment plan in EU Budget 2017		Filled as of 31/12/201737		Modifications in year N-1 in application of flexibility rule		Establishment plan in voted EU Budget 2018		Modifications in year N in application of flexibility rule		Establishment plan in Draft EU Budget 2019		Establishment plan 2020		Establishment plan 2021	
	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA	Officials	TA
AST 8		8		1				3				3		3		3
AST 7		12		3				10				11		11		11
AST 6		16		4				10				10		10		10
AST 5		9		16				15				15		15		15
AST 4				23				5				5		5		5
AST 3								5				5		5		5
AST 2				5												
AST 1				4												
Total AST		55		52				52				52		52		52
AST/SC1				2												
AST/SC2																
AST/SC3								2				2		2		2
AST/SC4																
AST/SC5																
AST/SC6																
Total AST/SC				2				2				2		2		2
TOTAL		182		178				180				180		180		180

Annex 4. Recruitment, performance appraisals, mobility, gender balance

A. Recruitment policy

Temporary agents

Type of key functions

The establishment table focuses on the core functions of the Centre: the temporary agents. Temporary agents are foreseen to form the core capacity, that is, operating the Centre; and in addition, contract agents are recruited with a primary focus on support functions and junior experts.

Of key importance is the recruitment of highly qualified professionals in operational as well as in administrative and management functions. This is especially important, since ECDC is to be a Centre of excellence in a 'knowledge sector'. Moreover, the Centre needs to cover a broad range of specialist areas (including specialists in 55 diseases and conditions, and broad public health functions such as emerging infection, health determinants, burden of disease, training, response capacity, preparedness planning and disease surveillance and monitoring) which makes it essential to have access to a solid and broad basis of the best professionals. Many positions are expert posts, specialised in specific fields of public health such as epidemiology. The epidemiological resources in Europe, at senior level, are limited and therefore it is important to offer appropriate incentives and attractive conditions.

The establishment table reflects the emphasis on building up internal expert capacity and attracting the best experts in the fields of competence of the Centre. Hence, broadly, two thirds of the temporary agent posts are identified at administrator (AD) level, the majority of the posts intended for technical experts in areas such as public health and epidemiology. The large number of AD staff is seen as possible since a support capacity is built up around temporary agents on assistant (AST) level for the core support functions. Another important part of the Centre's administrative support capacity relies on contract agents.

Selection procedure

The selection procedure for temporary agents follows the Centre's implementing rules on temporary agents which is the model implementing rules for all agencies. In this implementing rule it's a provision for internal selection which the Centre uses. The Centre's aims at carrying out recruitment processes in an objective, transparent and highly efficient manner, respecting the candidate confidentiality as well as recruitment ethics. The focus is on recruiting and selecting the best candidates with a high level of professional competency and motivation. Selection committees consist of at least three members including a representative of the staff committee and take into account gender and geographical balance as well as unit belonging.

Entry grades

Temporary agents are recruited at the levels of AST/SC 1, AST 1 to AST 4 for the assistant (AST) category and at the levels of AD 5 to AD 8 for the administrator (AD) category.

Temporary agents at the level of Head of Unit are mainly recruited at the AD 11 grade. Deputy Heads of Unit are recruited mainly at grade AD 10. Recruitment of temporary agents at grades AD 9, AD 10 and AD 11, or on an exceptional basis, AD 12, remains within the 20% limit of the total of AD posts recruited annually over a five-year period.

The balance between expert and senior expert staff (AD 5 and AD 8) is in line with the objective to attract experienced senior experts while at the same time aiming at recruiting experts who can grow professionally along with the Centre. This will enable the Centre to have a well-balanced staffing as to assure that activities are carried out with the view of providing the best expertise as well as to secure business continuity.

When recruiting staff, the Centre may consider when possible to use the full range of grades as provided for in the statutory provisions.

Taking into consideration that the Centre focuses on recruiting many contract staff in supportive functions, it is the aim of having experienced senior administrative support staff (AST 4 and above) to coordinate the contract staff.

Contract duration

The contract duration for temporary agents is initially five years with a possibility of renewal of an additional five years and a possible second renewal resulting in a contract of indefinite duration. Temporary agent posts are normally identified as posts of possible long-term employment.

At its expiry each contract is considered, on a case-by-case basis, for possible renewal taking into account in particular the identified requirements from the work programme.

Job profiles

The Centre's temporary agents are mainly recruited for:

- operational posts (technical experts in the operational units);
- management posts;
- sensitive posts in administration, e.g. human resources, legal, finance, ICT.

The Centre's temporary agents are mainly employed for following posts and corresponding entry grades:

- AD 5–7 Experts operational units, etc.
- AD 8 Senior Experts in operational units, Heads of Section, etc.
- AD 10 Deputy Heads of Unit, Senior Experts in specific areas (External relations, etc.);
- AD 11–12 Heads of Unit;
- AST/SC 1 Administrative Assistants;
- AST 4 Procurement Officers, Human Resources Officers, Information Officers, etc.

Contract agents

The Centre's contract agents are mainly in the administrative unit, in projects and programmes. The ones in supportive functions are important in order for the organisation to focus on the core tasks. The ones in operational functions are crucial for the development of short-term operational projects as well as ensuring junior technical support in the long-term operational disease programmes.

The basic rules for contract agents are formulated in the Centre's contract agent policy as well as the implementing rules on engagement and use of contract staff based on the model decision.

Selection procedure

The selection procedure for contract agents follows the Centre's implementing rules which is the model decision for agencies. The Centre's aims at carrying out recruitment processes in an objective, transparent and highly efficient manner, respecting the candidate confidentiality as well as recruitment ethics. The focus is on recruiting and selecting the best candidates with a high level of professional competency and motivation. Selection committees consist of at least three members including a representative of the staff committee and take into account gender and geographical balance as well as unit belonging.

Functions and contract duration

Contract agent functions are defined according to two main categories: long-term functions and short-term function as follows:

- Long-term functions are assistant/officer posts in administrative support functions (financial assistants, assistants in mission & meetings, human resources assistants, assistant secretaries, legal officers, web editors, editors etc) and junior experts in operational programmes of long-term nature;
- Short-term functions could be posts for projects.
- The contract duration is set as follows:
- long-term contracts have an initial duration of five years, with a possibility for a renewal of additional five years. A possible second renewal leads to an indefinite contract.
- short-term contracts have a duration dependent on the nature of the function, and can be either two years with a possibility for a renewal of up to two additional years, or three years with a possibility for a renewal of up to three additional years. The maximum duration of the contract is four or six years accordingly.

At its expiry each contract is considered, on a case-by-case basis, for possible renewal taking into account in particular the identified requirements from the work programme.

Job profiles

The Centre's contract agents are mainly recruited for:

- administrative support functions;
- junior experts in operational programmes;
- projects;

Contract agents are recruited within Function Group I – IV, precise grading being determined by the experience of the appointed candidate, in accordance with Staff Regulations and the applicable implementing rules.

The Centre's contract agents are mainly employed in following posts and corresponding grades:

- FG I Logistics assistants, etc.
- FG II Office assistants, etc.
- FG III Financial assistants, human resources assistants, travel/mission assistants, information assistants, etc.

- FG IV Junior experts in operational programmes/projects, junior ICT developers, editors, legal officers etc.

Seconded national experts

Article 29 (3) of the Centre’s founding regulation provides for the following: ‘Secondment to the Centre of public health experts, including epidemiologists, for a defined period of time, for the achievement of certain specified tasks of the Centre will be encouraged within the framework of existing regulations.’ On this basis, the Centre has adopted a decision laying down the rules concerning seconded national experts at ECDC which was revised in 2009 to take into account the changes adopted by the European Commission and deemed relevant for the Centre.

SNEs are considered an important resource bringing expertise in specific areas within the Centre’s mandate and facilitating the development of links with Member States. Seconded National Experts coming to the Centre are mainly at Senior Expert level working on operational activities.

Structural service providers

Structural service providers (consultants) are brought in to carry out and strengthen ICT projects and tasks supporting the functioning of the agency. This includes functions such as ICT infrastructure (ICT front office and back office), data management as well as projects for software development and implementation of IT systems.

Through open calls for tender, the Centre has several framework contracts covering ICT services/consultancy and data management.

Interims are used to temporarily cover replacements due to maternity, parental and sick leave, vacancies and in exceptional circumstances for support functions in peak periods. Through an open call for tender, the Centre framework contracts with interim agencies.

B. Appraisal of performance and reclassification/promotions

Table. Reclassification of temporary staff/promotion of officials (2017 exercise)

Category and grade	Staff in activity at 1.01.Year N-2 (2016)		How many staff members were promoted/reclassified in Year N-1 (2017)		Average number of years in grade of reclassified/promoted staff members
	Officials	TA	Officials	TA	
AD 16					
AD 15					
AD 14					
AD 13		1			
AD 12		4			
AD 11		4		1	6.8
AD 10		5			4.8
AD 9		9		2	4.9
AD 8		33		2	5.7
AD 7		1			2.8
AD 6		16		7	3.6
AD 5		37		7	4.2
Total AD		110		19	
AST 11					
AST 10					
AST 9					
AST 8					
AST 7		4		1	5.8
AST 6		2			6.0
AST 5		12		1	4.7
AST 4		28		2	4.1
AST 3					
AST 2		5		2	5.2
AST 1		8			

Category and grade	Staff in activity at 1.01.Year N-2 (2016)		How many staff members were promoted/reclassified in Year N-1 (2017)		Average number of years in grade of reclassified/promoted staff members
	Officials	TA	Officials	TA	
Total AST		59		6	
AST/SC1					
AST/SC2					
AST/SC3					
AST/SC4					
AST/SC5					
AST/SC6					
Total AST/SC					
Total		169		25	

Table. Reclassification of contract staff (2017 exercise)

Function Group	Grade	Staff in activity at 1. January Year N-2 (2016)	How many staff members were reclassified in Year N-1 (2017)	Average number of years in grade of reclassified staff members
CA IV	18			
	17	1		
	16	2		
	15	2	2	4.4
	14	29	7	5.4
	13	10		
CA III	12	1		
	11	2		
	10	8		
	9	17	1	4.8
	8	7	3	5.4
CA II	7			
	6	1		
	5	9	2	6.0
	4			
CA I	3			
	2	1		
	1	1	1	3.3
Total		91	16	

C. Mobility policy

a) Internal mobility along with quantitative evolution

In 2017, 44 % of vacancies (17 out of a total of 39) were filled by internal staff. One of these vacancies was filled by internal staff in accordance with Article 4 of the Implementing Rules on the procedure governing the engagement and use of temporary staff under Article 2(f) CEOS.

b) Mobility between agencies

In 2017, six staff members left ECDC to be employed by another agency (two of them through inter-agency mobility). Two new staff members coming from another agency joined ECDC. In total, the Centre now has 26 staff members who previously worked for an EU agency (25 who directly joined ECDC from another agency and 1 who previously worked in another agency, but did not join ECDC directly after employment with that agency).

c) Mobility between agency and Institutions

In 2017, two staff members left ECDC to be employed by an institution (European Commission including its missions, representations and executive agencies). In total, ECDC now has 17 staff members who previously

worked for an EU institution (14 who directly joined ECDC from an institution and 3 who previously worked in an institution, but did not join ECDC directly after employment with that institution).

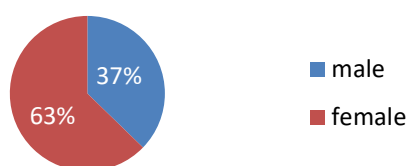
D. Gender balance

Table. Gender balance at ECDC as of 31 December 2017 (offers not included)

	CA	AST (including AST/SC)	AD	Total TA	Total ECDC
Male	22	16	60	75	98
Female	75	34	56	87	165
Total	97	50	116	166	263

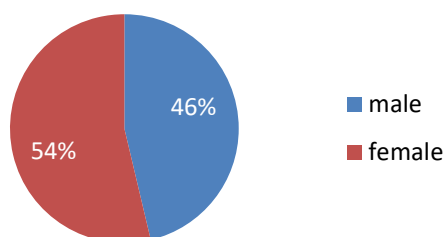
In total, the Centre employs 63% women and 37% men (TAs and CAs).

Total ECDC

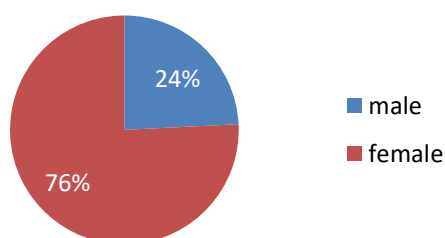


The gender balance within the different contract types is for temporary agents 54% women and 46% men and for contract agents 76% women and 24% men.

Temporary agents



Contract agents



The gender balance is considered important and is taken into account by the appointing authority in recruitments. One of the organisational HR objectives is to further strengthening the gender balance in management positions.

The proportion of women in new appointments to management posts (Director/Heads of Units) has a goal of 50%. The current gender balance in this category is 33% women and 67% men.

Moreover, the gender balance is taken into account when appointing selection committees in recruitment processes as to further strengthen the view of both genders and encourage a mixed collaboration in the important work of finding the most competent candidates.

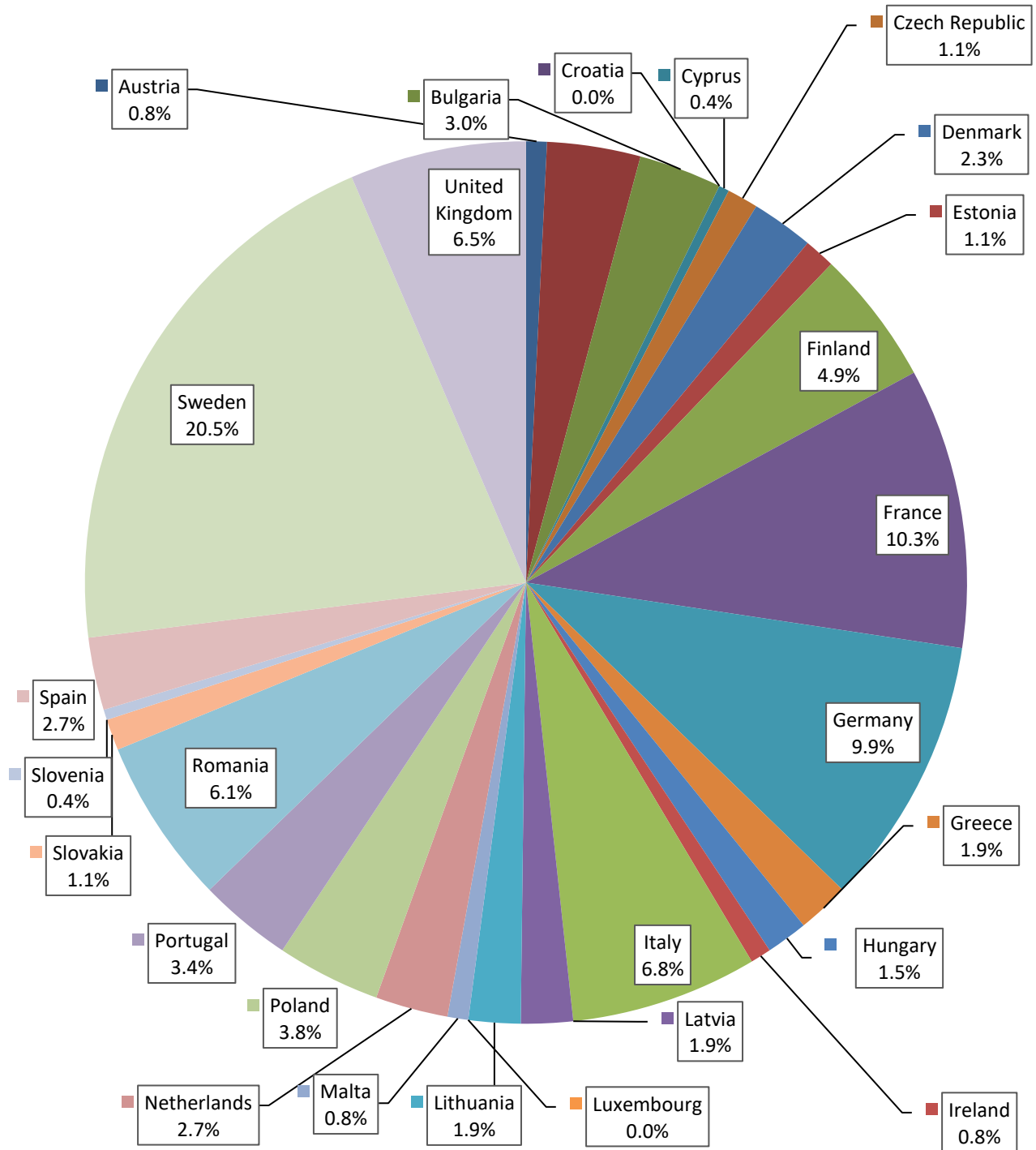
The Centre is fully committed to the provision of equal opportunity for its entire staff through its employment practices. It is aiming at developing an environment taking into account diversity and ensuring that no one is treated inequitably due to gender, marital status, age, nationality, sexual preference or religion. This is done through a series of measures including statements in vacancy notices, as mentioned above in composition of selection committees, conditions of work (e.g. flexitime, teleworking policy, part-time).

Nationality balance

On 31 December 2017, ECDC employs staff from 26 Member States (offers not included):

Nationality	AST/SC	AST	AD	TA total	CA	SNE	ECDC total
Austria	0	0	1	1	1	0	2
Belgium	0	0	6	6	3	0	9
Bulgaria	0	0	5	5	3	0	8
Croatia	0	0	0	0	0	0	0
Cyprus	0	1	0	1	0	0	1
Czech Republic	0	0	2	2	1	0	3
Denmark	0	3	2	5	1	0	6
Estonia	0	0	1	1	2	0	3
Finland	0	1	9	10	3	0	13
France	0	3	15	18	9	0	27
Germany	0	6	14	20	6	0	26
Greece	0	0	3	3	2	1	6
Hungary	0	0	3	3	1	1	5
Ireland	0	1	1	2	0	0	2
Italy	0	2	10	12	6	1	19
Latvia	0	2	2	4	1	0	5
Lithuania	0	1	0	1	4	0	5
Luxembourg	0	0	0	0	0	0	0
Malta	0	0	2	2	0	0	2
Netherlands	0	2	3	5	2	0	7
Poland	1	2	1	4	6	0	10
Portugal	0	1	4	5	4	0	9
Romania	1	6	3	10	6	0	16
Slovakia	0	0	1	1	2	0	3
Slovenia	0	0	1	1	0	0	1
Spain	0	2	3	5	2	0	7
Sweden	0	11	16	27	27	0	54
United Kingdom	0	4	8	12	5	0	17
Total	2	48	116	166	97	3	266

ECDC total without SNEs



E. Schooling

There are a number of alternatives regarding international schooling within the region where the Centre is situated (international schools, German, British, French, Finnish schools). There is no European school in Stockholm.

Public schools, whether Swedish or international, are free of charge. Private school fees are high; although national grants per student reduce fees. However, the private International School situated in the Stockholm City Centre charges very high fees and the double educational allowance only covers a minimal part of the fees of this school.

There has been no special agreement set with any particular school.

It should be noted that the seat agreement between the Centre and the Swedish government provides for the possibility to consider a European section or school.

Annex 5. Building

Table. Building information

	Name, location and type of building	Other comment
Information to be provided per building:		
Surface area (in square metres) <ul style="list-style-type: none"> • Of which office space • Of which non-office space 	Gustav III boulevard 40 Hilton 3 building Total surface: 9 407 sqm <ul style="list-style-type: none"> • Office space: 4 905 sqm • Non-office space 4 502 sqm 	Office space includes: offices, meeting rooms, boardroom, auditorium, EOC social areas and reception. Non-office space includes: corridors, stairs, toilettes, storage areas, server rooms, technical rooms, canteen, cafeteria, basement and parking.
Annual rent	Hilton 3 building Gustav III:s boulevard 40 169 73, Solna, Sweden	The rent cost projection without indexation for 2018 is SEK 12 925 722 SEK and for 2019 SEK 23 420 883.
Type and duration of rental contract	Gustav III:s boulevard 40 Contract start date is 27 Feb 2018. Expiration date 27 Feb 2033.	15-year contract with the option of two renewals of five years each. Termination notice period 12 months.
Host country grant or support	No financial support is provided by the host country.	Host country support was extended in the process of identification of the new premises and in ensuring that the provisions of the seat agreement with regard the new premises are implemented.

Annex 6. Privileges and immunities

Agency privileges	Privileges granted to staff	
	Protocol of privileges and immunities/diplomatic status	Education/day care
<p>The Agency enjoys the privileges stipulated in the Protocol on the Privileges and Immunities of the European Communities (Articles 1 to 4 of the Protocol)</p>	<p>Articles 12 to 16 of the Protocol on the Privileges and Immunities of the European Communities are applicable to the staff of the Centre.</p> <p>This includes:</p> <ul style="list-style-type: none"> • Immunity from jurisdiction as regards acts carried out by them in their official capacity. • Exemption from regulations restricting immigration and formalities for the registration of foreigners. • Right to import household effects from their last country of residence or from the country of which they are nationals. <p>The Director of the Centre and the Deputy to the Director together with their families are granted the immunities and privileges accorded to heads of diplomatic missions and members of their families.</p>	<p>Family members of staff have access to day care/education in accordance with Swedish legislation.</p>

Annex 7. Evaluations

External evaluation

ECDC's Founding Regulation requires the Centre to organise external evaluations every five years to assess how it performs with regard to its mission. The Second Independent External Evaluation of ECDC, conducted by a consortium led by Rome-based consultancy Economisti Associati, was concluded in 2014. The report looked at the period 2008–2012.

In response to the evaluation, the Management Board adopted a set of recommendations in its June 2015 meeting. Based on the recommendations of the Board, ECDC developed an action plan for the implementation of actions, approved by the Management Board in November 2015. In November 2017, ECDC presented to the Board the final report on the implementation of the actions.

The external evaluation is available on ECDC website:

<http://www.ecdc.europa.eu/en/aboutus/Key%20Documents/ECDC-external-evaluation-2014.pdf>

In 2018, ECDC started its third external independent evaluation. A working group, dubbed the 'Management Board External Evaluation Steering Committee (MEES)', composed of representatives of the Member States, the European Commission and the European Parliament steers the evaluation, which was outsourced an external contractor. The final report is expected for mid-2019. The Management Board will issue recommendations based on the final evaluation report.

Internal evaluations

In addition, ECDC adopted a new procedure for the internal evaluation of its work in 2015. In 2015, ECDC assessed the governance of its IT. In 2016, a second internal evaluation was done on the deployment of ECDC experts in Africa. In 2017, ECDC started to systematically evaluate its Disease Programmes with the development of a common protocol for all Disease Programme evaluations. The first two programmes to be evaluated in 2018 are IRV and FWD. An internal evaluation of ECDC's intranet and the document management system took place in 2018. Every year, several ECDC's projects or products will be assessed.

The scope of the procedure is the implementation of the Internal Control Framework 12: 'The Agency deploys control activities through corporate policies that establish what is expected and in procedures that put policies into action', and: 'The impact assessment and evaluation of financial expenditure and other non-spending activities are performed in accordance with the guiding principles of the Commission's better regulation guidelines, to assess the performance of EU interventions and analyse options and related impacts on new initiatives.'

All evaluations should be linked to activities listed in the Single Programming Document. Evaluations will generally be conducted ex-post and should be part of a multi-annual plan approved by the Director.

Evaluations should be carried out for interventions such as: work programme activities, programmes, projects, processes, the work of disease networks and also more generic functions performed by the Centre (e.g. preparedness, epidemic intelligence, procurement).

The following areas do not fall within the scope of this procedure:

- The five-year external evaluations³⁸; internal evaluations complement the five-year external evaluations by providing additional evaluations of specific products or services.
- Audits.
- Specific internal self-assessments/evaluations performed by individual Units with the purpose to continuously improve their products or services (e.g. peer reviews, evaluations of Unit-specific processes).
- PHE evaluations, CMMI, individual appraisals, as they follow dedicated methodologies.

An annual evaluation plan and multi-annual evaluation programme are approved by the Director, after consultation of the relevant internal stakeholders, and are strategically aligned with the SMAP.

In addition, the Financial Regulation (Art. 29(5)) requires regular ex-ante, interim or ex-post evaluations for certain interventions³⁹.

³⁸ ECDC Founding Regulation, Article 14.5.b

³⁹ 'Such evaluations shall be applied to all programmes and activities which entail significant spending and evaluation results shall be sent to the Management Board.' (Evaluation ([Article 29\(5\) FR](#))).

The multi-annual evaluation programme should take into account the life cycle of the interventions, the operational and strategic needs of the Units, general requirements for evaluation, and any specific requirement for evaluation as set out in the legal base of the intervention.

All interventions addressed to external parties must be periodically evaluated in proportion with the allocated resources and the expected impact.

The timing of evaluations must be such that the results can inform decisions on the design, renewal, modification or suspension of activities.

The criteria to rank and select potential evaluation topics were: criticality of the process/activity, impact on customers, need for improvement, frequency of use, relevance of the process/activity to the entire organisation.

The new process was piloted in 2015 to assess the governance of IT. The evaluation was completed, and the report was endorsed by the SMT in February 2016.

Regular stakeholder surveys

In 2015, ECDC launched its first stakeholder survey targeted at members of the Management Board, Advisory Forum, Competent Bodies, National Focal Points and relevant external stakeholders (EU institutions, relevant EU agencies, international organisations). The survey was analysed and the results were presented to the Management Board. Improvements are proposed and implemented as part of an action plan. In 2015, the corrective actions were included in a common action plan together with the external evaluation. A second survey was conducted in 2016.

Monitoring of ECDC work programme implementation

The implementation of ECDC work programme is managed through a Management Information System, as well as dedicated dashboards that are reviewed monthly by the Senior Management Team. Quarterly meetings are organised with all Heads of Units and Disease Programmes to review the level of implementation of the Work Programme. An update is given at each meeting of the Management Board.

Annex 8. Risk assessment for the Single Programming Document 2019

As part of preparing the draft Single Programming Document (SPD) 2019, ECDC conducted a high-level risk self-assessment exercise in order to identify the main risks that could impact the implementation of the SPD 2019. A more detailed exercise was conducted for the final SPD 2019 in October 2018, at which stage the main risks and mitigating measures were confirmed.

The following main risks were identified:

- Risk of SPD implementation suffering from a PHE event or impacted by other unforeseen additional politically prioritised activities. Although ECDC is always prepared to scale down activities, such a situation would still imply that ECDC would not be able to implement all parts of the SPD as planned.
- Unavailability of data from Member States and/or unavailability of Member States/stakeholders resources to contribute to and/or participate in ECDC activities. At the moment, ECDC enjoys good acceptance and support from stakeholders, but budget constraints in Member States or stakeholder organisations could negatively influence their priorities regarding ECDC-related activities.
- Outsourcing of activities. Any outsourcing implies dependence on external parties. All forms of non-delivery on the part of external parties (including insufficient quality) would potentially jeopardise the implementation of the SPD. Good planning and follow-up of outsourced work (including quality control) should reduce this risk to an acceptable level. However, with the transformation of the ICT Unit and the implementation of a new target operating model in 2018/2019, there is a high risk of potential delays in ICT service delivery as services depend on successful procurement procedures and new external contractors.
- Cooperation with the European Neighbourhood Policy (ENP) partner countries is at risk of being disrupted/stopped in 2019 due to lack of external funding.
- Any budget cuts in the 2019 budget and/or cuts of posts in the establishment table 2019 would impact the SPD negatively. A specific risk for the SPD 2019 are the potential negative effects of the ongoing Brexit negotiations. Also, any large change in the exchange rate (SEK/EURO) could impact budget implementation and thus the execution of the SPD.

The following main actions were identified:

- Regarding the dependence of ICT services on successful procurement procedures and new external contractors, ECDC conducted a comprehensive risk assessment for the target operating model and confirmed that the risk levels are low or medium. ECDC will therefore continue to:
 - adjust resources and/or plans for the SPD 2019 based on the current level of activities;
 - build up sufficient capacity in the ICT Unit for the transformation (training courses in 2018 and 2019); and
 - give special attention to the procurement procedures (to be finalised in Q4 2018). The procedures are on track, but ECDC is mindful that delays in these procedures will have an impact on the transformation and could cause significant delays in service delivery; this could also deteriorate the quality of services.
Deadline: Q3 2019.
- Regarding the cooperation with ENP partner countries, the following steps were decided: Depending on the outcomes of the discussions between DG SANTE and DG NEAR in 2018 regarding the follow-up of grants and external financing to support the EU Agencies' cooperation with ENP partner countries, ECDC will organise: one meeting of ECDC contacts in ENP countries, and one or two technical meetings in 2019. If ECDC cannot secure external funding, the Centre will use the TAIEX mechanism.
Deadline: Q4 2019.
- ECDC will closely follow, and liaise with, the European Commission on the Brexit negotiations. ECDC will strengthen its impact analysis based on updated knowledge in early 2019.
Deadline: Q1 2019.

Annex 9. Grants

List of grants 2019

1. ERLTB-Net

Subject matter of the action: ERLTB-Net: Implementation of laboratory coordination activities, including lab network coordination, EQA, training, strain collection, typing, scientific advice & technical guidance on lab issues as well as methods harmonisation and network meeting.

Type of grant: Specific grant agreement

Objective of the grant: To strengthen the TB laboratory services in the EU.

Expected result: Ensure coordination and full establishment of the network and enhance support to master the challenges of TB control and elimination at EU level.

Expected amount 2019: EUR 199 600

Expected launch: Q1 2019

Maximum rate of co-financing: 90%

Human resources from ECDC (FTEs): 24 days (0.16 FTEs)

2. Monitoring and evaluation of VENICE.Net

Subject matter of the action: Monitoring and evaluation: Continuation of VENICE.net activities for VPDs incl. influenza under the existing FWC

Type of grant: Launch of the new Framework partnership agreement

Objective of the grant: To continue the VENICE project.

Expected result: To collect information on the national vaccination programmes through a network of professionals and ensure its availability to Member States and relevant stakeholders.

Expected amount 2019: 0 EUR

Expected launch: Q2 2019

Maximum rate of co-financing: 90%

Human resources from ECDC (FTEs): 48 days (0.3 FTE)

3. Scientific coordination of ECDC Fellowship Programme and hosting of fellows

Subject matter of the action: Scientific Coordination of ECDC Fellowship Programme (Epidemiology (EPIET) and Public Health Microbiology (EUPHEM) paths) and hosting of fellows at Training Sites

Type of grant: Specific grant agreements under existing framework partnership agreements

Objective of the grant: To ensure that EU-track fellows can be employed by their Training Sites with the financial support of ECDC and to ensure the availability of highly qualified scientific coordinators

Expected result: Successful running of the ECDC Fellowship Programme

Expected amount 2017: EUR 2 459 000

Expected launch: Q4 2018

Maximum rate of co-financing: 90%

Human resources from ECDC (FTEs): 100 days (0.66 FTEs)

List of specific agreements: 25 specific agreements

Financing decision 2019

Strategy	Functional group	Generic description of procurements	Financing decision amount	Indicative number and type of procurements	FWC number	Indicative period		
1. Surveillance and epidemic intelligence	1. Public health surveillance	Data management	663 000	3 specific contracts under framework contract; 1 reopening of competition;	ECDC/2017/009 New framework contract	Q4 2018- Q2 2019		
		Total	663 000					
	2. Molecular surveillance	Molecular surveillance		311 000	2 open calls for tender; 2 negotiated procedures; 4 specific contracts under framework contract	ECDC/2014/042 ECDC/2015/022 ECDC/2016/040 ECDC/2018/012 New framework contract	Q4 2018- Q2 2019	
			Total	311 000				
			3. Methods to support disease prevention and control	Evaluation of EU/EEA surveillance systems	276 000	1 specific contract under framework contract;	ECDC/2016/037	Q4 2018
				Methods to support disease prevention and control (analysis of surveillance data and GIS)	476 170	2 open calls for tender; 3 specific contracts under framework contract; 1 reopening of competition	New framework contract	Q3 2018- Q1 2019
	Total	752 170						
	Total 1. Surveillance and epidemic intelligence		1 726 170					
	2. Scientific support	1. Scientific advice coordination	Consultancy services	24 000	1 negotiated procedure		Q1 2019	
			Methodology, standards and tools for scientific advice (including scientific advice repository, EBPH grading system, needs and use of scientific advice)	271 000	1 open call for tender; 1 negotiated procedure; 2 specific contracts under framework contract	New framework contract	Q3 2018- Q1 2019	
Total			295 000					
4. Management and administrative support		ESCAIDE scientific conference 2018	400 000	1 specific contract under framework contract	ECDC/2017/011	Q4 2018		
		Library	300 000	1 negotiated procedure; 1 specific contract under framework contract	New framework contract	Q4 2018- Q4 2019		
		Open access publications	11 000	2 negotiated procedures		Q4 2018- Q2 2019		
		Total	711 000					
Total 2. Scientific support			1 006 000					
3. Preparedness and response	1. Support to EU outbreaks	EOC	21 000	3 negotiated procedures		Q4 2018		
		Risk assessment	59 500	1 specific contract under framework contract	New framework contract	Q1 2019		

Strategy	Functional group	Generic description of procurements	Financing decision amount	Indicative number and type of procurements	FWC number	Indicative period
		Total	80 500			
	2. EU preparedness	EU preparedness (incl. PH emergencies preparation, biorisk, simulation exercises)	180 000	3 specific contracts under framework contract	New framework contract	Q2 2019- Q2 2019
		Trainings (PHE preparedness, biorisk)	25 000	1 specific contract under framework contract	New framework contract	Q2 2019
		Total	205 000			
	Total 3. Preparedness and response		285 500			
4. Training and capacity building	1. Fellowships EUPHEM - EPIET	Public health training	32 000	1 specific contract under framework contract	ECDC/2017/015	Q1 1
		Total	32 000			
4. e-learning	E-learning		100 000	2 specific contracts under framework contract	ECDC/2015/036	Q1 2019- Q2 2019
		Total	100 000			
	5. Management and administrative support	Training strategy; quality assurance (accreditation)	5 000	2 negotiated procedures		Q1 2019
	Total	5 000				
	Total 4. Training and capacity building		137 000			
5. Communication	1. Press, media and Information services	Press media and information (incl. audiovisuals, exhibition stands, graphic design support, branded items, media monitoring)	255 000	3 negotiated procedures; 4 specific contracts under framework contract	ECDC/2014/035 ECDC/2017/019 New framework contract	Q4 2018- Q4 2019
		Total	255 000			
		Eurosurveillance	Eurosurveillance	25 400	1 negotiated procedure; 1 specific contract under framework contract; one or more order forms	ECDC/2017/015
		Total	25 400			
	Total 5. Communication		280 400			
6. Management/ Administration	COP 2. Working with European Union and member States	European Forum Gastein workshop	22 000	1 negotiated procedure		Q4 2018
		Total	22 000			
	COP 3. Working with non-EU Countries	Working with non-EU Countries	20 000	One or more order forms		Q1 1
		Total	20 000			
	ICT 1. Software services	ICT business analysis, internal development and external software	200 108	1 reopening of competition	New framework contract	Q4 2018
		Total	200 108			
	IT solutions	IT solutions	4 608 892	43 specific contracts	DI.7660	Q4 2018-

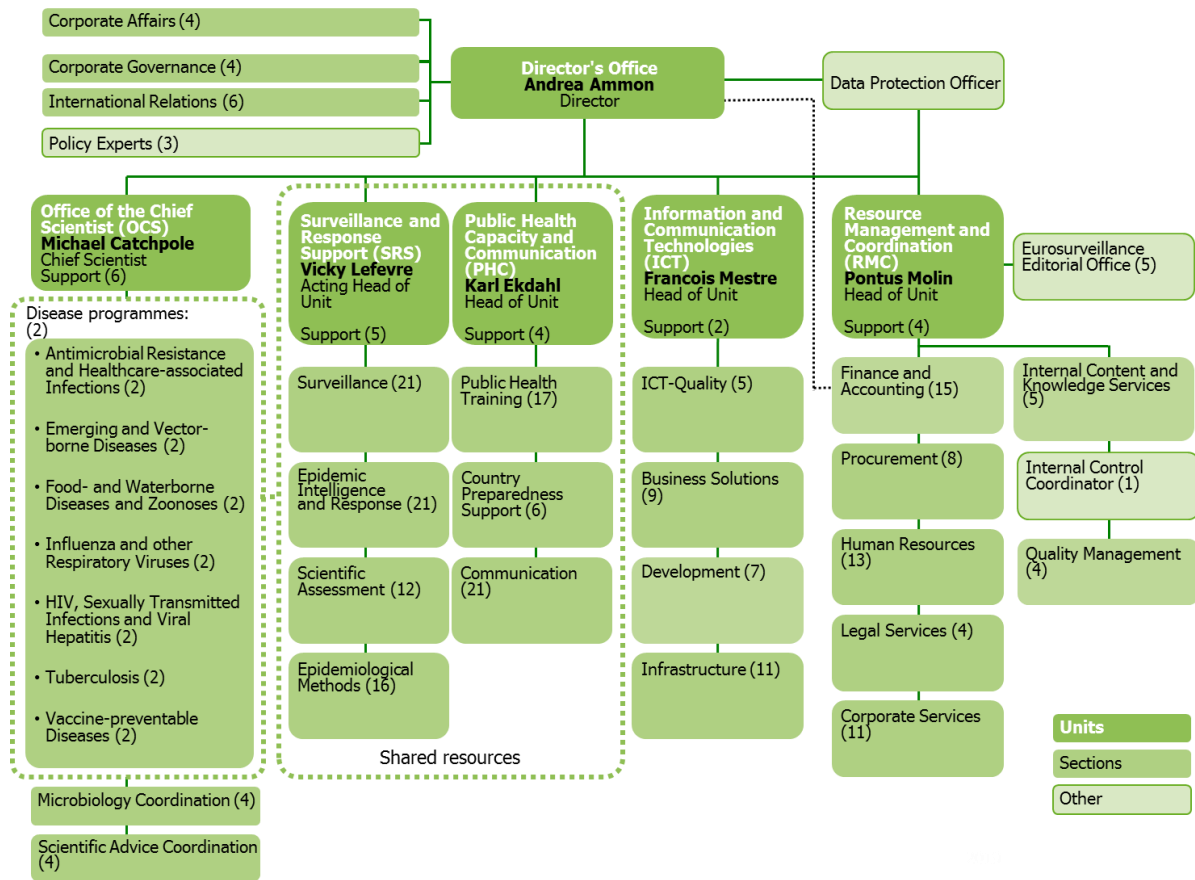
Strategy	Functional group	Generic description of procurements	Financing decision amount	Indicative number and type of procurements	FWC number	Indicative period
				under framework contract; 17 reopenings of competition; one or more order forms	DIGIT/A3/PO/2017/023 – SIDE II ECDC/2014/028 ECDC/2014/029 ECDC/2014/030 ECDC/2016/015 ECDC/2016/031 ECDC/2017/016 New framework contract	Q3 2019
		Total	4 608 892			
	RES6. Internal Communication and Knowledge Services	Knowledge management services	270 000	4 specific contracts under framework contract	ECDC/2016/015 New framework contract	Q4 2018- Q3 2019
		Total	270 000			
	Total 6. Management/Administration		5 121 000			
7. Disease programmes	Antimicrobial resistance and Healthcare-Associated Infections (ARHAI)	ARHAI: Antibiotic awareness day	90 000	5 negotiated procedures		Q2 2019- Q3 2019
		ARHAI: Antimicrobial susceptibility testing	167 500	2 specific contracts under framework contract	ECDC/2015/024 ECDC/2017/017	Q4 2018- Q1 2019
		ARHAI: ARHAI infection prevention and control (including toolbox, training, etc.)	15 000	1 negotiated procedure		Q4 2018
		ARHAI: Country preparedness visits	15 000	1 negotiated procedure		Q1 2019
		ARHAI: Estimation of burden for AMR and HAI	30 000	1 negotiated procedure		Q1 2019
		ARHAI: European <i>clostridium difficile</i>	31 200	1 specific contract under framework contract	ECDC/2016/016	Q1 2019
		ARHAI: European molecular surveillance of CPE	126 300	1 specific contract under framework contract	ECDC/2017/021	Q4 2018
		ARHAI: Infection prevention and control (including toolbox, training, etc.)	6 000	1 negotiated procedure		Q1 2019
		ARHAI: JIACRA report	40 000	1 specific contract under framework contract		Q4 2018
		ARHAI: Surveillance networks (including ESAC-net, EARS- net, HAI-net)	330 200	5 specific contracts under framework contract	ECDC/2015/004 ECDC/2016/042 ECDC/2017/008 ECDC/2017/016	Q4 2018- Q4 2018
		Total	851 200			
	Emerging and vector-borne	EVD: Dengue, chikungunya, Zika	70 500	2 negotiated procedures		Q1 2019- Q3 2019

Strategy	Functional group	Generic description of procurements	Financing decision amount	Indicative number and type of procurements	FWC number	Indicative period
	diseases (EVD)	EVD: Entomology network	200 000	1 open call for tender		Q4 2018
		EVD: EVDLabNet	225 000	1 specific contract under framework contract	ECDC/2016/002	Q4 2018
		EVD: Tick-borne diseases surveillance	90 000	2 negotiated procedures		Q1 2019- Q1 2019
		EVD: West Nile fever	44 500	2 negotiated procedures		Q1 2019- Q1 2019
		Total	630 000			
	Food & waterborne diseases (FWD)	FWD: EQA schemes (all schemes, including Legionella)	368 500	7 specific contracts under framework contract; 1 competitive procedure	ECDC/2016/043	Q4 2018- Q3 2019
					ECDC/2016/044	
					ECDC/2016/045	
					New framework contract	
		FWD: HevNet	15 000	1 negotiated procedure	New framework contract	Q1 2019
	FWD: VcJD	75 000	1 specific contract under framework contract	ECDC/2017/011	Q1 2019	
	Total	458 500				
	Influenza (IRV)	IRV: Scientific studies in the field of influenza and other respiratory viruses (including influenza vaccine effectiveness studies)	315 000	2 negotiated procedures; 3 specific contracts under framework contract; one or more order forms	ECDC/2018/029	Q4 2018- Q2 2019
					New framework contract	
		IRV: Support to the influenza network and laboratories (including training, mortality monitoring, EQA, virus characterisation support)	381 000	2 negotiated procedures; 5 specific contracts under framework contract	ECDC/2016/041	Q4 2018- Q3 2019
					ECDC/2017/001	
	ECDC/2017/002					
	ECDC/2017/005					
	Total	696 000				
	Sexually transmitted infections, including HIV, STI and blood-borne viruses (HSH)	HSH: Hepatitis	145 000	1 open call for tender; 2 negotiated procedures; 1 specific contract under framework contract	ECDC/2016/017	Q1 2019- Q3 2019
HSH: HIV and Hepatitis Modelling tools and methods		140 000	5 specific contracts under framework contract	ECDC/2016/018	Q1 2019- Q3 2019	
				ECDC/2018/014		
				ECDC/2018/027		
				ECDC/2018/028		
HSH: HIV/STI surveillance	115 000	3 negotiated procedures		Q1 2019- Q1 2019		
HSH: Scientific support	196 000	1 open call for	ECDC/2016/033	Q1 2019-		

Strategy	Functional group	Generic description of procurements	Financing decision amount	Indicative number and type of procurements	FWC number	Indicative period
				tender; 3 negotiated procedures; 2 specific contracts under framework contract	ECDC/2017/007	Q3 2019
		HSH: Surveillance	225 000	1 negotiated procedure; 2 specific contracts under framework contract	ECDC/2014/041 ECDC/2017/004	Q1 2019- Q3 2019
		Total	821 000			
	Tuberculosis (TB)	TB: Programme evaluation	95 000	2 specific contracts under framework contract	New framework contract OJ/2017/RMC/9315	Q1 2019- Q2 2019
		TB: TB Elimination	80 000	1 open call for tender; 2 specific contracts under framework contract	New framework contract	Q4 2018- Q1 2019
		TB: WGS (TB)	221 400	1 specific contract under framework contract	ECDC/2017/012	Q4 2018
		Total	396 400			
	Vaccine Preventable Diseases (VPD)	VPD: Lab coordination activities (pertussis, IBD, diphtheria)	180 000	1 open call for tender; 1 negotiated procedure; 2 specific contracts under framework contract	ECDC/2015/009 ECDC/2016/001 New framework contract	Q1 2019- Q1 2019
		VPD: Monitoring and evaluation (VENICE, Council conclusions, migrants)	140 000	3 negotiated procedures; 1 specific contract under framework contract	New framework contract New Partnership Agreement	Q1 2019- Q3 2019
		VPD: Other (incl. training on polio eradication for Member States, preparedness, vaccine acceptance)	30 000	1 negotiated procedure		Q1 2019
		VPD: Scientific studies (pertussis, SpidNet, pneumococcal vaccination)	720 000	1 open call for tender; 2 specific contracts under framework contract	ECDC/2015/017 ECDC/2015/031 New framework contract	Q4 2018- Q2 2019
		VPD: Vaccination portal	320 000	2 negotiated procedures; 2 specific contracts under framework contract	New framework contract	Q4 2018- Q1 2019
		Total	1 390 000			
	Total 7. Disease programmes		5 243 100			
8. External meetings	Total		3 838 230			
Total			17 637 400			

Annex 10. Organisational chart

Organisational chart, year N+1



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