TENDER SPECIFICATIONS

Reference: OC/EFSA/BIOCONTAM/2021/01
Subject: Provision of support to EFSA and to ECDC in the production of the European Union Summary Report (EUSR) on Antimicrobial Resistance (AMR) in zoonotic and indicator bacteria from humans, animals and food and in the production of related AMR online interactive data visualisation dashboards and AMR story maps
Procurement procedure: Open call (Article 164(1) (a) of the Financial Regulation)- EU bodies joint procurement for the following EU bodies: EFSA and ECDC herein referred as "EU Body" under singular or plural form.

Tender specifications' purpose:

1. specify what the EFSA will buy under the contract resulting from this procurement procedure;
2. announce the criteria which the EFSA will use to identify the successful contractor;
3. guide tenderers in the preparation and sending of their offer;
4. form annex 1 of the contract resulting from this procurement procedure and be binding for contract implementation.

Additional guidance:
Please read the **EFSA Guidance for tenderers** available on the EFSA website, designed to assist potential tenderers in their understanding of EFSA procurement procedures.

Provide EFSA with feedback:
If you considered applying to this call for tenders but finally decided not to, please provide **EFSAProcurement@efsa.europa.eu** with your feedback on the call and reasons for not applying. Feedback will be treated confidentially and will only be used for improving future EFSA procurement calls.

PROCEDURE TIMETABLE

Milestone	Date[1]	Comments
Launch date	30/07/2021	Date Contract Notice is sent to Official Journal
Deadline for sending request for clarification to EFSA	24/09/2021 at 14:30	Requests for clarification may only be submitted through the e-Tendering website as described in the Invitation Letter. EFSA is not obliged to reply to clarifications received less than 6 working days before the deadline for submission of offers.
Deadline for EFSA to reply to clarification questions	28/09/2021	
"Receipt Time Limit" - Closing date and time for receipt of offers	**01/10/2021 at 14:30**	Refer to the Invitation letter and part 3 of these tender specifications regarding how to submit your offer.
Opening session	**04/10/2021 at 14:30**	Requests to attend the online opening session must be made 2 working days in advance of the opening session. Refer to Invitation letter for details.
Notification of evaluation results	Estimated November 2021	The outcome of the procurement procedure will be communicated to all tenderers exclusively using the e-mail address indicated in their offer. Please check regularly the inbox in question.
Contract signature	Estimated January 2022	

[1] All times are in the time zone of Italy, the country in which EFSA is based.

PART 1 TECHNICAL SPECIFICATIONS - WHAT DOES THE EU BODY NEED TO BUY THROUGH THIS PROCUREMENT PROCEDURE?

1.1 BACKGROUND

This call for tenders is being launched as joint procurement between the European Food Safety Authority (EFSA) and the European Centre for Disease Prevention and Control (ECDC) for the production of the Joint EFSA-ECDC EU Summary Report (EUSR) on Antimicrobial Resistance (AMR) in zoonotic and indicator bacteria from humans, animals and food.

EFSA, as the leading EU body of this call for tenders (lead awarding authority), is the keystone of European Union (EU) risk assessment regarding food and feed safety. In close collaboration with national authorities and in open consultation with its stakeholders, EFSA provides independent scientific advice and clear communication on existing and emerging risks. EFSA is responsible for providing scientific advice on food safety to risk managers (the European Commission and Member States) as stated in the EFSA Founding Regulation (EC) 178/2002. Information about EFSA can be found under the following link: https://www.efsa.europa.eu/en/aboutefsa

The EU system for monitoring and collection of information on zoonoses and antimicrobial resistance (AMR) is based on the Directive 2003/99/EC[2] and Commission Implementing Decision (EU) 2020/1729[3], which obliges European Union (EU) Member States (MS) to collect relevant and, when applicable, comparable data on zoonoses, zoonotic agents and AMR. In addition, MS shall assess trends and sources of these agents, as well as outbreaks in their territory, submitting an annual report each year[4] by the end of May to the European Commission covering the data collected. The European Commission should subsequently forward these reports to EFSA. EFSA is assigned the tasks of examining these data and publishing the EU Annual Summary Reports. In 2004, the European Commission entrusted EFSA with the task of setting up an electronic reporting system and database for monitoring of zoonoses and AMR (EFSA Mandate No. 2004-0178[5]).

Monitoring AMR in bacteria from food-producing animals and food

Directive 2003/99/EC on the monitoring of zoonoses and zoonotic agents set out generic requirements for the monitoring and reporting of AMR in isolates of zoonotic *Salmonella* spp. and *Campylobacter* spp., as well as in selected other bacterial species – in so far as they present a threat to public health – from food-producing animals and food in the EU/EEA countries. In line with the general requirements of Directive 2003/99/EC, EFSA provided specific guidance on the monitoring and reporting of AMR in *Salmonella* spp. and *Campylobacter* spp., and in indicator *E. coli* and enterococci and in

[2] Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC and repealing Council Directive 92/117/EEC. OJ L 325, 12 December 2003 pp. 31–40.
[3] Commission Implementing Decision (EU) 2020/1729 of 17 November 2020 on the monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria and repealing Implementing Decision 2013/652/EU. OJ L 387, 19 November 2020 pp. 8-21.
[4] In this context, the 'reporting year' is the year to which reported data refer.
[5] https://open.efsa.europa.eu/questions/EFSA-Q-2020-00788

MRSA, as well as on representative random sampling designs.

The AMR monitoring in food-producing animals and food was further harmonised by Commission Implementing Decision 2013/652/EU and then by Commission Implementing Decision 2020/1729/EU. These Commission Implementing Decisions set out monitoring priorities from a public health perspective and described those combinations of bacterial species, antimicrobial substances, food-producing animal populations and food categories which should be monitored as a minimum requirement, respectively from 2014 and 2021 onwards. The monitoring of AMR in zoonotic bacteria focused on the animal populations to which the consumer is most likely exposed through food derived thereof, such as poultry, pigs and cattle. The antimicrobials considered in the harmonised monitoring consisted of a concise set of substances selected according to their relevance to human therapeutic use (e.g. critically important antimicrobials (CIAs) with highest priority for human medicine) and/or of epidemiological relevance. Both Commission Implementing Decisions also defined the frequency of the monitoring and the extent to which the sampling is required.

The monitoring of AMR is mandatory in zoonotic *Salmonella* spp. and *Campylobacter* spp., as well as in indicator *E. coli* from the major food-producing animal populations domestically produced. The specific monitoring of ESBL/AmpC/CP-producing *E. coli* is also planned. Bacterial isolates derive from monitoring representative programmes based on random sampling. From 2014 onwards, poultry/poultry meat is monitored in even-numbered years and pigs, bovines (under one year of age), pork and beef in odd-numbered years.

AMR Key Outcome Indicators

A list of harmonized key outcome indicators on AMR in food-producing animals has been published[6] to support EU countries in their progress in reducing the use of antimicrobials and antimicrobial resistance. The list is divided into primary and secondary indicators. The indicators are based upon data already collected through the monitoring systems.

EFSA's AMR data management process

When AMR data are submitted to EFSA, they are managed by EFSA's Evidence Management (DATA) unit focusing on their technical validation, meaning their compliance with the data model and business rules, to allow extraction of technically validated data, subsequent data analyses in the form of analytical reports, graphs, maps, documents and dashboards (see Fig.1). The unit has established specific data management processes to facilitate data collection, collation, analysis and summarisation in the area of AMR data, in accordance with Directive 2003/99/EC, Commission Implementing Decision 2013/652/EU and Commission Implementing Decision (EU) 2020/1729.

[6] ECDC (European Centre for Disease Prevention and Control), EFSA BIOHAZ Panel (European Food Safety Authority Panel on Biological Hazards) and CVMP (EMA Committee for Medicinal Products for Veterinary Use), 2017. ECDC, EFSA and EMA Joint Scientific Opinion on a list of outcome indicators as regards surveillance of antimicrobial resistance and antimicrobial consumption in humans and food-producing animals. EFSA Journal 2017 ;15(10):5017, 70 pp. https://doi.org/10.2903/j.efsa.2017.5017

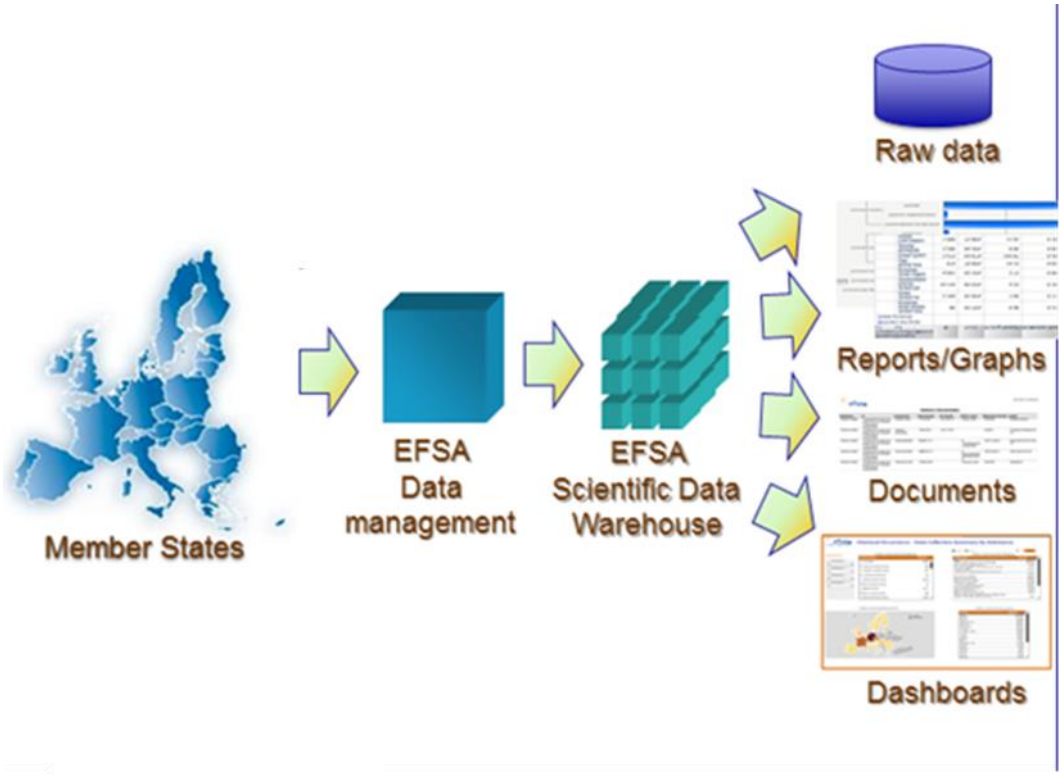

Figure 1 Data cycle illustrating the collection, collation, and automated summarisation of data by EFSA

The transmission standards SSD2, and AMR data models also define a series of standard terminologies providing a unique vocabulary to transmit, unambiguously and in a language-independent manner, data to EFSA. Standard terminologies facilitate the collation of data in the EFSA scientific data warehouse (DWH).

To support data collection and management, EFSA also developed and/or implemented a series of tools (see Fig.2). EFSA developed a Data Collection Framework (DCF) that allows data providers to submit data preferably in Extensible Mark-up Language (XML) format through a web interface or a web service. EFSA developed SAS extraction, transformation and loading (ETL) procedures to validate and transfer DCF data in the scientific DWH. The scientific DWH is implemented on an Oracle Data Base Management System. EFSA develops and maintains ETL procedures bringing, at final stage, technically validated data to the scientific DWH. For the data access (reporting) from the scientific DWH, data can be extracted or analysed with several tools (MicroStrategy for web accessible analytical reports or graphs, for documents or for interactive dashboards, and ArcGIS for preparation of maps).

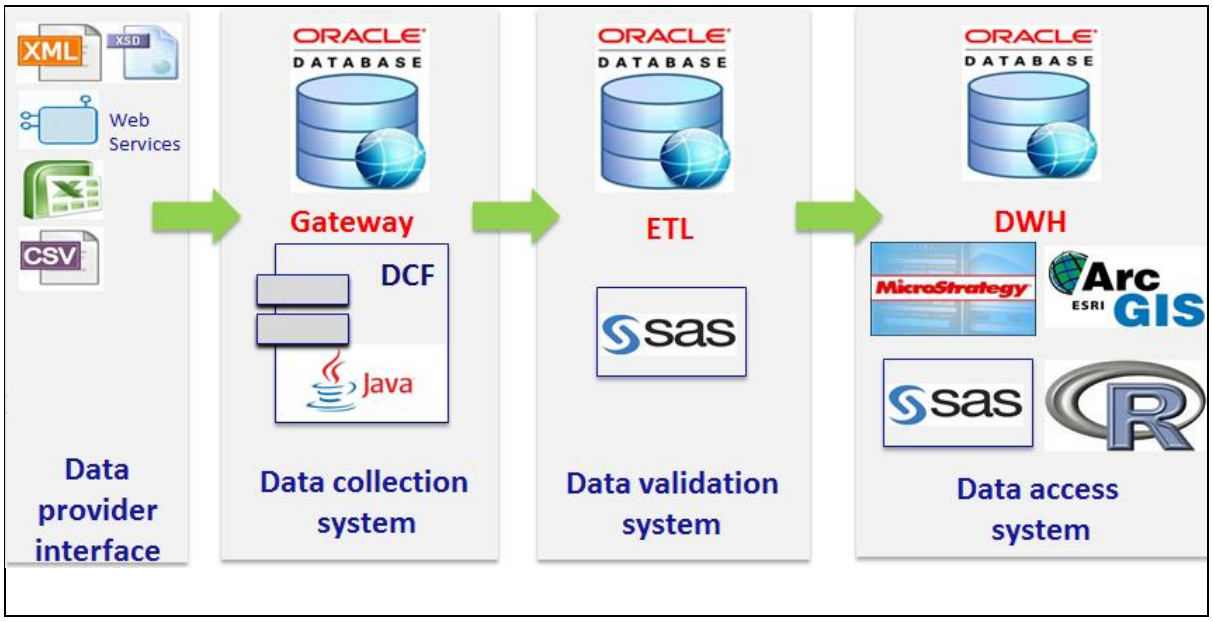

Figure 2: EFSA tools for data collection, management and reporting

As regards AMR data, EU MS, European Economic Area (EEA) and IPA countries contribute to the system by uploading to the EFSA DCF their monitoring data once per year, during April and May. During this reporting period, countries upload data from the reporting year, which is the year when samples were collected. Data are thus submitted in the reporting year n+1. In order to support these data collection activities, EFSA coordinates the Scientific Network for Zoonoses Monitoring Data[7] that is composed by Network members nominated by each MS. Data transmission uses XML data transfer covering the reporting of isolate-based AMR data[8,9].

ECDC's surveillance of AMR related to foodborne infections in humans and related data management process

The data on zoonoses cases in humans and related AMR are sourced from The European Surveillance System (TESSy)[10], maintained by the European Centre for Disease Prevention and Control (ECDC) that is responsible for the surveillance of communicable diseases in humans. The data on AMR from foodborne infections are provided by MS to ECDC through the European Food- and Waterborne Diseases and Zoonoses Network (FWD-Net)[11]. Data collection on communicable diseases in humans from MS is conducted in accordance with Decision 1082/2013/EU[12] on serious cross-border threats to health. The case definitions

[7] https://www.efsa.europa.eu/en/data/networks
[8] EFSA (European Food Safety Authority), Amore G, Beloeil P-A, Bocca V, Boelaert F, Gibin D, Papanikolaou A, Rizzi V and Stoicescu A-V, 2021. Zoonoses, antimicrobial resistance and food-borne outbreaks guidance for reporting 2020 data. EFSA supporting publication 2021:EN-6438. 112 pp. doi:10.2903/sp.efsa.2021.EN-6438
[9] EFSA (European Food Safety Authority), Amore G, Beloeil P-A and Stoicescu A-V, 2021. Manual for reporting 2020 antimicrobial resistance data within the framework of Directive 2003/99/EC and Decision 2013/652/EU. EFSA supporting publication 2021:EN-6442. 26 pp. doi:10.2903/sp.efsa.2021.EN-6442.
[10] https://www.ecdc.europa.eu/en/publications-data/european-surveillance-system-tessy
[11] www.ecdc.europa.eu/en/about-us/partnerships-and-networks/disease-and-laboratory-networks/edsn
[12] Decision No. 1082/2013/EU of the European Parliament and of the Council of 22 October 2013 on serious cross-border threats to health and repealing Decision No. 2119/98/EC. OJ L 293, 5 November 2013, pp. 1–15.

to be followed when reporting data on infectious diseases to ECDC are described in Decision 2018/945/EU[13]. The decision stipulates mandatory testing and reporting of a representative subset of *Salmonella* and *Campylobacter* isolates using methods and criteria specified in the EU protocol for harmonised monitoring of antimicrobial resistance in human *Salmonella* and *Campylobacter* isolates[14].

EU MS and EEA countries upload their monitoring and surveillance data from humans to TESSy also once per year, by the end of May. Automated validation rules are applied at data submission, followed by manual validation and feedback by the disease experts. The data submitters can reupload data for which issues have been detected. The process for AMR data validation is normally finalised by early October. Since 2021, AMR related to foodborne infections are also published in the ECDC Surveillance Atlas of Infectious Diseases[15].

Joint EFSA-ECDC EU Summary Report on AMR

EFSA and ECDC produce jointly the annual EU Summary Reports on AMR that integrate data and information available on AMR in bacteria from humans and from the food chain. Data have been collected by the EU MSs and other reporting countries on AMR in accordance with the Directive 2003/99/EC and since 2014, with the Commission Implementing Decision 2013/652/EU.

To respond effectively to the constantly evolving threat of AMR, further enhancements and specific adaptations have been regularly required on an on-going basis. Under the new One Health action plan (2017), the European Commission has published the Commission Decision (EU) 2020/1729 on the monitoring and reporting of antimicrobial resistance in zoonotic and commensal bacteria and repealing Implementing Decision 2013/652/EU, to take into account new scientific developments and data collection needs.

The annual EU Summary Reports on AMR assess trends and sources of AMR in bacteria from humans and from food-producing animals and derived meat. A customer feedback report from EFSA's stakeholders and customers on the efficacy, efficiency, relevance, added value, coherence and timeliness of the annual EU summary report on zoonoses, food-borne outbreaks and AMR in collecting data and supporting informed risk assessment and risk management was previously published[16]. It contains recommendations to further optimise these annual joint EFSA-ECDC AMR summary reports.

The volume and quality of AMR data submitted to EFSA and to ECDC have increased considerably over the last decade and the EUSRs on AMR have become larger. Starting from 2019, the report has been produced using a new 'overview' format that covers the most recently reported AMR data on bacteria from the most relevant food-producing animals and food from the last two consecutive years. This in order to give a complete overview of the AMR situation in relevant animal populations and derived meat that, according to the legal requirements, are tested on a rotating basis (i.e. fattening pigs and

[13] Commission Implementing Decision 2018/945/EU on the communicable diseases and related special health issues to be covered by epidemiological surveillance as well as relevant case definitions. OJ L 170, 06 July 2018, pp. 1–74.

[14] European Centre for Disease Prevention and Control. EU protocol for harmonised monitoring of antimicrobial resistance in human *Salmonella* and *Campylobacter* isolates – June 2016. Stockholm: ECDC; 2016.

[15] https://atlas.ecdc.europa.eu/public/index.aspx. The AMR data are found under the respective disease.

[16] www.efsa.europa.eu/en/corporate/pub/eusr-report-customer-feedback

bovine animals (under 1 year of age) and meat derived thereof in odd-numbered years, and different poultry populations and derived meat in even-numbered years).

The latest issued EUSR on AMR covers the year 2019, and has been published in April 2021[17].

Purpose of this tender

As the volume and quality of submitted AMR data increase every year, yet the EUSRs on AMR need to be produced and published with limited resources within short deadlines to address the needs of the risk managers and other targeted audiences, it is the purpose of this call for tender to prepare the upcoming reports and to produce several interactive online AMR data visualisation dashboards, AMR story maps and DataVIZ to innovate and enhance the communication of this report, and raise awareness of AMR. The online dashboards and DataVIZ should show large volumes of related aggregated (summarised) AMR data and analysis results interactively, in a quick, robust and creative way. The AMR story maps will focus on storytelling and putting a context, while also displaying related evidence-based information. The aim is to refer with hyperlinks to the online dashboards and to the AMR story maps so as to reduce, as far as possible, standard narrative and repetitive sections in future AMR EUSRs.

EFSA is launching a procurement procedure in order to sign a framework contract for the **preparation of the 2021 EUSR on AMR and the EUSRs on AMR for the next three subsequent years**, covered by data reported by reporting countries (RC[18]), which are EU MSs and non-MSs, in accordance with Directive 2003/99/EC and Commission Implementing Decision (EU) 2020/1729, and for the **development of related online interactive AMR data visualisation dashboards and AMR story maps**, covered by data reported by RC in accordance with Directive 2003/99/EC and Commission Implementing Decision (EU) 2020/1729 that must be sourced from the EFSA DWH.

It should be acknowledged that the withdrawal of the UK from the EU had an impact on the collection of AMR data from January 2021. This will entail that, with respect to data sampled from 1 January 2021 onwards, EFSA will accept data of the UK only in respect to Northern Ireland (NI). The procedure for interacting with the data Provider from UK (NI) will be discussed and agreed with EFSA.

EFSA and ECDC seek to translate scientific evidence regarding AMR situation into clear, accessible and meaningful messages, addressing the needs of diverse audiences and in particular, raising awareness of AMR, in a One Health report approach.

The final outputs for the first year of the contract are expected to be published by the end of February of year N+2 (i.e. for the 2021 EUSR by the end of February 2023). The publication date for the following EUSR AMR (for 2022, 2023 and 2024 EUSRs), may be

[17] EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2021. The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019. EFSA Journal 2021;19(4):6490, 179 pp. https://doi.org/10.2903/j.efsa.2021.6490

[18] There are 34 reporting countries (RC): 27 EU MS and ten additional non-EU RC: Albania, Iceland, Montenegro, Republic of North Macedonia, Norway, Switzerland and the United Kingdom. The exclusion of any of the current 37 RC will have to be consulted and agreed with EFSA's relevant unit and the inclusion of new RC is at the discretion of the EFSA's relevant unit and will be notified in advance to the contractor.

revised/brought forward in close discussion and agreement between the EFSA, ECDC, EC and EURL AR. This amended publication date may impact on the deadline of several deliverables.

The EU Bodies will use all or some services described in these specifications, from the contract signature. These details are specified under points 1.2 and 1.3.

This call is based on EFSA's 2021 Work Programme for grants and operational procurements as presented in Annex XIa of the Programming Document 2021 – 2023, available on the EFSA's website[19].

1.2 OBJECTIVES

The present Call for tenders aims to conclude a framework contract up to a maximum of 4 years with one contractor. For more details on the administrative implementation modalities of the framework contract please refer to section 1.4 of these tender specifications.

The purpose of these Technical Specifications is to provide instructions and guidance to potential tenderers about the nature of the offer they shall submit and to explain clearly the services which the successful tenderer will have to provide during contract implementation, including the minimum requirements with which they will need to comply.

The overall objectives of the contract resulting from this procurement procedure are:

1) To prepare the 2021 EUSR on AMR and the next three annual EUSRs on AMR, and

2) To develop related online interactive AMR data visualisation dashboards, AMR story maps and DATAViz, which display data and information sourced from the EFSA DWH, to provide up-to-date, evidence-based and user-friendly characterisations of the AMR situation in interactive online platforms.

The services covered by the scope of objective 1 and objective 2 must be delivered to the EU Bodies in accordance with the highest quality standards to help convey core messages to both specialised and non-specialised audiences.

The following three work packages (WP) and tasks should contribute to achieving these two overall objectives, which are closely linked (intertwingled).

Work Package 1: Prepare the annual EUSR on AMR 2021-2024

To prepare the EUSRs on AMR for the reporting years 2021, 2022, 2023 and 2024, respectively during calendar years 2022, 2023, 2024 and 2025, covered by data reported by RC in accordance with Directive 2003/99/EC and Commission Implementing Decision (EU) 2020/1729 to EFSA and Decision 1082/2013/EU and 2018/945/EU to ECDC. For each year of the contract, the scope of the work (tasks), expected outcomes and deliverables are as follows:

[19] https://www.efsa.europa.eu/sites/default/files/corporate_publications/files/amp2123.pdf

- Provide support for data analysis (for EFSA and for certain specific items for ECDC- see list below) for 2021, 2022, 2023 and 2024 EUSRs. These deliverables must include:
    - summary of the comments on final version of the amended reporting manuals (excluding for the first year);
    - log of scientific support provided to RC;
    - new terms to be added in the catalogues;
    - list of new quality checks (BRs);
    - improvements of SAS analysis of the MicroStrategy tables;
    - codes for new analyses (also for ECDC);
    - codes for data extraction for the production of trends, graphs, figures and maps (also for ECDC);
    - codes for the extraction of data to feed the visualisations outputs produced under WP2: dashboards, story maps and EFSA DataViz (for the latter only the 4th year of this FWC) (also for ECDC when human data will be used);
    - codes for the extraction of specific AMR data for the production of DataViz by another EFSA's contractor (1st, 2nd and 3rd year of the FWC) (also for ECDC when human data will be used).

- Prepare protocols for scientific data validation (for EFSA) and plans of data analyses (for EFSA and ECDC) for all 2021, 2022, 2023 and 2024 EUSRs on AMR chapters, for review and approval (via email) by EFSA and ECDC. These deliverables must include:
    - detailed and relevant protocols for scientific AMR data validation on bacteria from food and animals (EFSA data stream), underpinned by deep knowledge of the EU legislation (minimum reporting requirements), of the EFSA data collection models and of the data collection manuals,
    - plans of data analyses for all data (humans, food, animals),
    - an exhaustive list of tables and figures (graphs and maps) for all chapters, for all sections (humans, food and animals);
    - plans for improvements mentioned in the 'Customer feedback report on EUSR zoonoses and AMR' (from 2022 EUSR onward).

- Conduct scientific validation of the AMR monitoring data reported on food-producing animals and food derived thereof (EFSA data stream) until full agreement with the RC. These deliverables must include:
    - Results and outcomes of scientific data validation. A two-step data validation takes place from beginning of June until approximately the end of July during which period the RC have two windows of opportunity to amend their data, as appropriate[20]. Thus, for the 2021 EUSR on AMR, the contractor will scientifically validate the data between approximately 3 June and 25 July of reporting year n+1, which is calendar year 2022 (exact dates will be defined in the order forms). Contractors must source the draft summary tables from the EFSA business intelligence application MicroStrategy to which they will be granted timely access[21]. EFSA will moreover provide datasets in the SAS/Excel format by beginning of June,

[20] www.efsa.europa.eu/sites/default/files/event/191021-m.pdf
[21] Access to the EFSA tools (document management system, business intelligence applications, other) is granted by the EFSA servicedesk, which may require few working days.

also for scientific validation purposes. Also, RC' narrative text composing their National Zoonoses Reports[22] will be provided by beginning of June, as complementary document for validation. Consultation of the EU Reference Laboratory (EURL-AR) for antimicrobial resistance [23] is appropriate.

- Selection of isolates for the Confirmatory testing exercise to be carried out by the EURL-AR and interpretation of the related results in close liaison with the EURL-AR and EFSA. The outcome of the Confirmatory testing exercise will be accounted for in the data analyses, where needed. For the purpose, resubmission of altered data on due time may be required from the RCs.
- Perform a screening/selection of the relevant ESBL, AmpC and CP genes to be analysed in order to calculate the occurrence of presumptive ESBL/AmpC and CP-producers. This applies in case the AMR monitoring is performed using WGS as an alternative method to carry out the specific monitoring of ESBL- or AmpC- or CP-producing *E. coli*. The selection of the genes should be done based on the Resfinder Database (DB) list, other relevant DBs, literature research and in close liaison with the EURL-AR.

- Fully validated human data will be provided by ECDC at the latest by early October, as either Stata datasets, Excel or CSV files, each year. A list over RC's findings of ESBL-, AmpC- or CP-producers in *Salmonella* spp. and related genes where available, will be provided separately in Excel.

- <u>Perform analyses of all validated data</u>
  - Descriptive and statistical analyses of the AMR data reported in a One Health report approach. For human data, the analyses should cover the most recent reporting year; for animal and food data, the analyses should cover the last two consecutive reporting years (in order to include the data from all relevant food-producing animal populations and derived food).
  - Descriptive and statistical analyses of temporal trends in prevalence and occurrence AMR data on bacteria from humans, food and animals over the past reporting years requires, at minimum: To compute and tabulate yearly **the occurrence of resistance**, the rate of complete susceptibility (CS), the rate of multidrug resistance (MDR) and the occurrence of microbiological and clinical combined resistance to CIAs per relevant combinations of bacteria/antimicrobial substance/animal population/food category; to compute and tabulate yearly the **prevalence of resistance** in *C. jejuni* and *C. coli* per relevant combinations of antimicrobial substance/animal population/food category; to compute and tabulate yearly the **occurrence of presumptive ESBL-/AmpC-/CP-producer**s in *Salmonella* and indicator *E. coli* obtained from the routine monitoring and **occurrence and prevalence of ESBL-/AmpC-/CP-producing *E. coli*** from the specific monitoring of ESBL as well as the occurrence and prevalence of CP-producing *E. coli* from the specific monitoring; to compute and tabulate yearly **Key Outcome Indicators (KOIs)**; to compute and tabulate yearly the **occurrence of MRSA** in food and food-producing animals, by analysing both MRSA prevalence data and antimicrobial susceptibility data. To perform a detailed analysis of the **MRSA *spa*-types** reported from the monitoring

[22] www.efsa.europa.eu/en/biological-hazards-data/reports
[23] www.ec.europa.eu/food/ref-labs_en

of food and food-producing animals (including horses); to perform yearly **temporal trend analyses** of relevant occurrence of resistance, prevalence of resistance in *C. jejuni* and *C. coli* isolates from food-producing animals, prevalence of ESBL, Outcome Indicators and KOIs and test for the statistical significance of those trends. Finally, to produce relevant illustrative figures, maps and graphs related to those analyses.
    - Comparison of the AMR data reported and related findings with the available data from the literature.
    - Reporting of the findings and analyses of the results at the EU level.

- Produce four versions of the EUSR on AMR (first version, second version, pre-consultation version and post-consultation or final version) including a Plain Language Summary (three versions), respectively by end of September, end of October, end of November and mid-January. The 2021 EUSR on AMR shall follow the format (layout and contents) of the 2020 EUSR on AMR[24], unless changes are agreed. Care should be taken in communicating the key findings also to the thoughtful but non-specialist general reader. It is expected that the contractor makes proposals to further enhance the EUSR AMR for the years 2022, 2023 and 2024, according to the recommendations cited in the before mentioned customer feedback report[25], based upon contractors' proposal and after agreement with EFSA and ECDC. Other possible improvements in a One Health approach could be offered by the tenderers. The contractor shall also prepare the files with aggregated data to be published as supplementary data on the EFSA Knowledge Junction[26].

- Carry out the consultation of the draft EUSR on AMR with RC and stakeholders from EFSA and from ECDC: EFSA, EFSA Scientific Network for Zoonoses Monitoring Data, EFSA BIOHAZ Panel, ECDC, ECDC Food and Waterborne Diseases and Zoonoses Network (FWD-Net), EC and the EURL for AMR[27]. A two-week consultation period is foreseen first half of December of reporting year n+1. Address and take account of the comments received from RC and stakeholders.

- Deliver the final draft EUSR on AMR to EFSA and ECDC for final approval, by email and/or by uploading it on EFSA and ECDC document management system. The delivery date is mid-January of reporting year n+2, thus the delivery date of the 2021 EUSR on AMR is estimated mid- January 2023.

- Coordinate with EFSA and its Network for Zoonoses Monitoring Data as well as with ECDC throughout the course of the project to discuss the key scientific decisions and allow timely communication of the results. This includes participation in the meetings of the Network for Zoonoses Monitoring (one meeting per year), meetings of the FWD-Net (by request, not more than twice during the four-year contract period) and preparation of a comprehensive briefing document presenting the draft

[24] EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2021. The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019. EFSA Journal 2021;19(4):6490, 179 pp. https://doi.org/10.2903/j.efsa.2021.6490
[25] http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/Annual-EUSR-Zoonoses-Food-Report-19.pdf
[26] https://zenodo.org/record/4557180#.YHVdWKziuUk
[27] www.ec.europa.eu/food/ref-labs_en

main findings and the needs for improving the scientific quality of the data submitted.

- Support the communication activities at the publication and post-publication (e.g. data extraction for specific countries, presentations) of the EUSR on AMR in liaison with EFSA's and ECDC's relevant scientific units and with their communication units. This activity will be done between January and March of the reporting year n+2. For the 2021 EUSR on AMR these activities are scheduled during January 2023 and March 2023.

- Support post-publication activities, if needed.

The EUSR on AMR should consider the following zoonotic and indicator bacteria, in line with the 2019/2020 EUSR on AMR[28]:

- *Salmonella* spp. and specifically, the most relevant serovars;
- *Campylobacter jejuni* and *Campylobacter coli*;
- Indicator *Escherichia coli*;
- Presumptive Extended-spectrum beta-lactamase (ESBL)-, AmpC- and/or carbapenemase-producing *Salmonella* and *Escherichia coli*;
- Methicillin-resistant *Staphylococcus aureus.*

EFSA and ECDC will share timely available working files (pilot data sets, data validation protocols, data analyses scripts, other as available), used to underpin previous EUSR on AMR, with the Contractor.

Work Package 2: Develop online interactive AMR data visualisation dashboards and AMR story maps

Specific tasks and expected deliverables:

To develop online interactive data visualisation dashboards and story maps on AMR topics, covered by data reported by RC in accordance with Directive 2003/99/EC, and Decision (EU) 2020/1729, which must be primarily sourced from the EFSA DWH (including historical data). Data must be displayed in dashboards and story maps in an aggregated (summarised) format, as exemplified by the files and Annexes published as supplementary information to the published - EUSR on AMR on the EFSA Knowledge Junction[29]. RC submit their data to EFSA using the following EFSA data model:

- EFSA data model for reporting isolate-based AMR data

[28] https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/j.efsa.2021.6490
[29] https://zenodo.org/record/4557180#.YHVdWKziuUk

More information on this data model, guidance documents and relevant documentation is publicly available [30] [31] [32] [33].

The expected audiences and end-users of dashboards and story maps to be targeted should include, in the order of importance:

- Policy makers and risk managers at both EU and MS levels (i.e. European Commission, European Parliament, Competent Authorities of the MSs);
- General public: European citizens;
- Selected public: The food production sectors, including farmers, other food producers and retailers;
- Academic, professional and research institutions and the pharmaceutical industry.

The AMR dashboards and AMR story maps are intended to innovate the communication of the EUSR on AMR. The use of hyperlinks in the EUSRs on AMR pointing to those dashboards and story maps should allow to reduce standard narrative and repetitive sections. These digital products are intended to translate scientific evidence into clear, accessible, simpler, and meaningful message, providing access to complex concepts and information in an easy and engaging way and addressing the needs of diverse audiences who prefer to explore the data in different ways. These digital products will have to follow EFSA's visual corporate guidelines (EFSA colour palette, fonts, etc.).

Online interactive AMR data visualisation dashboards

The online dashboards should show large volumes of aggregated data and analyse results interactively, in a quick, robust and creative way. The results of AMR monitoring should be translated into (browsable) charts, graphs, and maps. They should provide insights from the data and from the huge number of statistics, also to be readily understandable to the general public. Data and statistics displayed must be meaningful and illustrate clear messages or stories. These dashboards must present (non-exhaustive list):

- an overview of the AMR situation in food-producing animals and derived meat at the national level - where relevant, side by side comparison between AMR situations in bacteria from humans, food-producing animals and derived meat should be sought;
- an overview of the AMR situation in food-producing animals and derived meat at the EU level;

[30] EFSA (European Food Safety Authority), Amore G, Beloeil P-A, Bocca V, Boelaert F, Gibin D, Papanikolaou A, Rizzi V and Stoicescu A-V, 2021. Zoonoses, antimicrobial resistance and food-borne outbreaks guidance for reporting 2020 data. EFSA supporting publication 2021:EN-6438. 112 pp. doi:10.2903/sp.efsa.2021.EN-6438. https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/sp.efsa.2021.EN-6438

[31] Excel mapping tools for 2021 AMR data reporting are published on the EFSA Knowledge Junction (Zenodo): http://doi.org/10.5281/zenodo.4945726

[32] The EFSA catalogues applied for 2020 zoonoses data reporting are made available in Excel format for easier use and reference and published on the EFSA Knowledge Junction (Zenodo): http://doi.org/10.5281/zenodo.4459488

[33] EFSA (European Food Safety Authority), Amore G, Beloeil P-A and Stoicescu A-V, 2021. Manual for reporting 2020 antimicrobial resistance data within the framework of Directive 2003/99/EC and Decision 2013/652/EU. EFSA supporting publication 2021:EN-6442. 26 pp. doi:10.2903/sp.efsa.2021.EN-6442. https://efsa.onlinelibrary.wiley.com/doi/epdf/10.2903/sp.efsa.2021.EN-6442

- temporal trends in Key Outcome Indicators (KOIs) and selected antimicrobials over time at both EU and national level;
- comparison across MSs, food-producing animal populations and derived meat and antimicrobial substances.

The appropriate combinations of bacteria/substances/animal populations/food categories to be considered vary according to the analysis addressed, e.g. regarding bacteria, the relevant level may be either the bacterial genus (e.g. *Salmonella* spp.), the species (e.g. *Campylobacter jejuni*) or the serovar (e.g. *Salmonella* Enteritidis).

It must be possible to export and download the data that is being used to create the visualization dashboards. The data should be easily exported to a Microsoft Excel compatible format, such as a .xlsx or .csv file.

Interactive Dashboards are typically to be updated on a yearly basis. Still, possible errors raised after the go-live of dashboards and story maps should be addressed and adjusted accordingly.

Examples of online data visualisation dashboards: The National Antimicrobial Resistance Monitoring System (NARMS) which is an U. S. public health surveillance system that tracks antimicrobial resistance in foodborne and other enteric bacteria: https://www.fda.gov/animal-veterinary/national-antimicrobial-resistance-monitoring-system/narms-now-integrated-data; the resistance map which summarizes national and subnational data on antimicrobial use and resistance worldwide from The Center For Disease Dynamics, Economics & Policy (CDDEP): https://resistancemap.cddep.org/AntibioticResistance.php.

For the purpose of the present specifications, interactive visualisation tools include interactive dashboards and interactive DataViz (aesthetically similar to the none interactive one available online at: https://efsa.gitlab.io/multimedia/dataviz-2019/index.htm?lang=en).

EFSA currently uses MicroStrategy as business intelligence application. The online interactive dashboards should be created using either this application or Power BI. The definitive approach is still being defined by EFSA and will be confirmed at a later stage.

Online interactive AMR story maps

The online AMR story maps should present general and specific information on AMR (non-exhaustive list):

- General information about AMR and the different groups of antimicrobials;
- General information on relevant bacteria (both pathogenic and indicator bacteria), including how they contribute to the spread of the AMR;
- Relevant legislation;
- Current situation (overview) and geographic distribution. Note: it should be avoided duplication with what is presented in the dashboards;
- Links to relevant information projects and internet sources related to the specific topic.

Major part of this information is published in the 2019 EUSR on AMR and previous EU Summary Reports on AMR, as well as in relevant EFSA outputs.

The story maps contain a dynamic part (main panel) that may contain graphs and maps. Displayed data and results will be in an aggregated format. The main panel may also include pictures that can be found free of charge and copyright on the internet. Based on the summary information provided in the main panel, the narrative text (left panel) of the story maps should be created/designed. The text should be kept generic, so that it does not require too frequent updates. The text in the left panel should be in accordance with the information displayed in the main panel. Displayed information should be readily understandable to the general public.

Display of geographic distributions of prevalence/occurrence of AMR in specific bacteria and specific animal populations and derived food, is suggested to be done using interactive maps on ESRI platform within the EFSA environment (ESRI portal, Map journals online) or ArcGIS.

Examples of story maps:
EFSA vector-borne diseases story maps https://efsa.maps.arcgis.com/apps/PublicGallery/index.html?appid=dfbeac92aea944599ed1eb754aa5e6d1;https://efsa.maps.arcgis.com/apps/MinimalGallery/index.html?appid=f91d6e95376f4a5da206eb1815ad1489.
The NARMS Now: integrated report on AMR: https://www.fda.gov/animal-veterinary/national-antimicrobial-resistance-monitoring-system/2016-2017-narms-integrated-summary-interactive.
Example of Pesticide residues in food: track trends with our browsable charts: http://www.efsa.europa.eu/en/annual-pesticides-report-2018.

An overview of the online interactive data visualisation dashboards and story maps to be produced, maintained and updated with most recent data on an annual basis, is presented in Table 1. The table shows a list of outputs to be produced with a stepwise approach during the duration of the Framework contract (i.e. 4 years), with timelines specified in the table.

Zoonoses/topic	Dashboards	Story maps	Deadline
Key Outcome Indicators (KOIs): - **KOI_{CS}**: rate of complete susceptibility in indicator *E. coli* (from routine monitoring) in food-producing animals, - **KOI_{ESC}**: prevalence of ESBL and/or AmpC producing *E. coli* (specific monitoring) in food producing animals; - Prevalence of ESBL and/or AmpC producing *E. coli* (specific monitoring) in meat;			

Creation	X	X	End of 2022
Maintenance and data updates	X	X	End of 2023, end of 2024 and end of 2025
Occurrence of resistance to selected antimicrobials for all bacteria (excluding *Salmonella*); Occurrence of combined resistance to Critically Important Antimicrobials (CIAs)[34,35];			
Creation	X	X	End 2023
Maintenance and data updates	X	X	End of 2024 and of 2025
Prevalence of resistance to selected antimicrobials in *Campylobacter*			
Creation	X	X	End 2023
Maintenance and data updates	X	X	End of 2024 and of 2025
Occurrence of resistance to selected antimicrobials for *Salmonella* spp. and for *Salmonella* serovars Occurrence of combined resistance to Critically Important Antimicrobials (CIAs);			
Creation	X	X	End 2024
Maintenance and data updates	X	X	End of 2025
Levels of MDR			
Creation	X	X	End 2025

[34] WHO (World Health Organization- Advisory group on integrated Surveillance of Antimicrobial Resistance), 2019. Critically important antimicrobials for human medicine 6th Revision 2018. 45 pp. available online: https://www.who.int/publications/i/item/9789241515528

[35] OIE (World Organisation for animal health) OIE Lists of antimicrobial agents of veterinary importance 2019, 2021. available online: https://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/AMR/A_OIE_List_antimicrobials_July2019.pdf ; https://www.oie.int/app/uploads/2021/06/a-oie-list-antimicrobials-june2021.pdf

DataViz Tool **Creation**	X		End 2025

Considering the amount of data underpinning each dashboard, the contractor can decide to produce more than one dashboard per each topic based on a simpler/smaller dataset. This would allow to reduce the number of variables displayed/filtered in each dashboard and would generate more dashboards per year.

The contractor may propose to EFSA additional innovative story telling/interactive visualisation products (than story maps) which could be offered.

For each year of the contract, the tasks and deliverables by work package 2 are as follows:

- Conduct and deliver a requirements analysis and propose prototypes for the AMR dashboards and for the AMR story maps to be built, at the start of every year.

- Produce five versions of online interactive AMR data visualisation dashboards, including DataViz (first version, second version, third version, pre-consultation version and post-consultation or final version). The production of the online interactive AMR data visualisation dashboards includes the development and implementation of the product, as well as the testing (on different browsers and devices) and quality assurance before the publication. Maintenance in the following year should be guaranteed. The dashboards for *Salmonella* should present the occurrence of resistance to different substances at level of *Salmonella spp.* as well as at level of *Salmonella* serovars. As the patterns of resistance associated to specific serovars can influence the overall resistance levels in *Salmonella spp.*, it must be paid special attention to specific serovars exhibiting particular multidrug resistance profiles, such as *S*. Enteritidis, *S.* Infantis, *S.* Typhimurium and its monophasic variant, *S.* Kentucky and *S.* Derby, among others.

- Produce five versions of interactive online AMR story maps (first version, second version, third version, pre-consultation version and post-consultation or final version). Maintenance in the following year should be guaranteed (within the time frame of the FWC). Additionally, the story maps produced during the first year of the contract should also include information regarding the harmonised monitoring design in animals and their derived meat, in accordance with the legislation and the technical specifications issued by EFSA. Information related to the antimicrobials tested, the method used, the type of data collected and the analyses performed as well as information regarding the relevant legislation should be also provided. The story maps concerning *Salmonella* should also present information for selected serovars because of their public health relevance and/or prevalence.

- Conduct consultation with RC and stakeholders (see above list) from EFSA, and from ECDC and stakeholders upon agreement, of the draft dashboards, AMR story maps and DataViz. A two-weeks consultation period is foreseen on the first half of December of reporting year n+1. Address and take account of the comments received from RC and stakeholders.

- Deliver the final online interactive AMR data visualisation dashboards, story maps and DataViz to EFSA for final approval. The delivery date for these communication tools is mid-January of reporting year n+2.

- Coordinate with EFSA and its Network for Zoonoses Monitoring Data throughout the course of the project to discuss the products. This will include participation in the meetings of the Network for Zoonoses Monitoring (one meeting per year) and preparation of a comprehensive briefing document presenting the draft main findings and the needs for improving the scientific quality of the data submitted.

Work Package 3: Project management and communication

Specific tasks and expected deliverables are:

- Project management: coordinate the project and monitor overall progress. For sound contract execution, the Contractor shall provide a **formal contact point**, the **Project Leader**, who shall be in place at the time of signature of the Framework contract. The Project Leader will be responsible for the overall contact, management and coordination of implementation of all services requested by EFSA and ECDC. He/she will be the interface for all commercial and contractual matters and the overall contact point for the services requested. The Project Leader will serve as a single point of contact for EFSA's project. He/she will ensure the high quality of the products developed under the contract, and the consistency between the deliverables of work package (WP) 1 and WP 2. The Project Leader will be responsible to provide solutions/alternatives in the event of non-delivery of high-quality products requested under this contract. The Project Leader will make sure at the start of every year of contract that the policies for operation (e.g. use of document management system of EFSA for archiving documents, data, data visualisations, codes, other) are agreed by all parties involved.
- Kick-off meeting and final meeting organisation (face-to-face meetings)
- Organise interim face-to-face meetings (estimated three specific meetings for WP 1 and three specific meetings for WP 2) and eventual ad-hoc face-to-face meetings. If required, EFSA and ECDC and the contractor will organise ad-hoc face-to-face meetings with EFSA, ECDC, the contractor and any required partner (team member). The location in the EU will be agreed upon between EFSA, ECDC and the contractor. The meeting agenda and meeting documents should be shared and agreed upon with EFSA and ECDC prior to sending out the invitations. The costs of organising the meeting, including the contractor's salaried hours to organise and administrate the meeting, as well as fixed costs such as travel, accommodation and subsistence for all participants, as well as the meeting location venue, shall be paid by the contractor. EFSA and ECDC will cover its own costs for travel, accommodation and subsistence for participation at this meeting.
- Regular (minimally monthly) updating web-meetings with EFSA to discuss the progress and agree on solutions for problems that occurred during the implementation of the project.
- Regular updating web-meetings with disease experts in ECDC needed when human data are analysed and the chapters are written.
- Participation in the meetings of the EFSA Network for Zoonoses Monitoring, subgroup on AMR (one meeting per year)

Participation in meetings of the FWD-Net (by request, not more than twice during the four-year contract period)

This table below clarifies for EFSA and for ECDC which services they will be able to order and from when. The values indicated are estimated amounts.

EU Agency	Country	Estimated envelope for 4 years (in EUR)	Expected start of use of FWC if not signature date	Tasks to be ordered by the EU Body
European Food Safety Authority EFSA	Italy	1,968,550 €	Signature date	EFSA will order all work packages as indicated in the table of section 1.3 and in Annex 1 - Financial offer.
European Centre for Disease Prevention and Control ECDC	Sweden	80,000 €	Signature date	For the whole duration of the FWC, ECDC will order deliverables 5, 6 and 7, of WP 1 as indicated in the table of section 1.3 and in Annex 1 - Financial offer.
TOTAL		**2,048,550€**		

1.2.1 Service Level Agreement

The following service level agreements (SLAs) and penalties will be applied to measure the quality and compliance with pre-defined deadlines applicable to:

ID	SLA	Maximum # of deviations	Penalty scheme[36]
■ SLA01	■ Single point of contact (Project Manager of WP 3)	■ Maximum 2 replacements in 4 years of contract implementation	■ Possible resolution of the contract from the appointing EU body side
■ SLA02	■ Delays of compliance with pre-defined deliverables deadlines	■ Zero deviation	■ Penalty of 15% for each week of delay, to be deducted from the order form value of each of the affected deliverable
■ SLA03	100% correctness and compliance of: ■ content (e.g. proofreading of spelling mistakes, text compliant to agreed script and/or proposal, etc.); ■ design (e.g. compliance with the appointing EU body's corporate design guidelines in terms of colour palette, use of graphical elements, etc.);	■ per year for the project brief ■ 1 per year for the content ■ 1 per year for the design ■ 1 per year for the requested change	■ Penalty of 15% to be deducted from the order form value for the affected projects if more than 1 mistake per year per area (project brief, content, design or requested change) is reported.

[36] Penalties will be deducted from the Contactor's service fees of the relevant deliverables upon payment of the final balance invoice.

ID	SLA	Maximum # of deviations	Penalty scheme[36]
■ SLA04 Applicable for WP 2 only	100% compliance of final products (AMR dashboards and AMR story maps) with technical requirements/ specifications as per the appointing EU body's project brief; product must be: ■ responsive and accessible from mobile, tablets and desktop devices; ■ compatible with the latest stable versions of the main browsers (Chrome, Firefox, Safari, Microsoft Edge); ■ working interactive features; ■ alterable (e.g. code should be readable and commented). ■ All these features should be ensured via thorough technical tests.	■ 1 deviation	■ Penalty of 15% to be deducted from the order form value for each of the affected deliverables if more than 1 mistake is reported

1.3 TASKS, DELIVERABLES, TIMELINE AND PAYMENTS

No.	Tasks & deliverables	Can be subcontracted?[37]	Deadline
Work package 1			
1	**Task: Support data analyses** • Scientific review of manuals for reporting 2022, 2023 and 2024 AMR data; • Scientific support to EFSA's Data Unit on scientific advise the RC how to report their data; • Scientific revise of the catalogues (e.g. annual update of the relevant genes); • Propose and create new quality checks: BRs applied in SAS on the entire datasets reported; • Improve the SAS analysis of the data displayed in the MicroStrategy tables; • Propose and create SAS codes for new analysis of the data reported (e.g. including newly reported ESBL gene data analysis) in MicroStrategy; • Propose and create the SAS code to extract the datasets for trend analysis; • Propose and create the SAS code to extract the datasets for maps; • Propose and create the R or Stata code to analyse and present the human data (for ECDC) • Propose and create the SAS code to extract the datasets for dashboards, story maps and Data Viz produced by another contractor (1st, 2nd and 3rd year of the FWC) and DataViz produced by the current contractor (4th year of the FWC). **Deliverable:** log/summary of the comments on the amended reporting manuals; log of scientific support provided to RC; new terms to be requested to be added in the catalogues; list of new quality checks (BRs); improvements of SAS analyses of MicroStrategy tables; SAS codes for new analysis and for data extraction for the production of trends, graphs, figures and maps including human data from ECDC using R or Stata; codes for the extraction of data to feed the visualisations outputs produced under WP2: dashboards, story maps and EFSA DataViz (for the latter only the 4th year); codes for the extraction of specific AMR data for the	No	Revision of manuals: **by end of August** of reporting year n (not valid for the first year of the contract) Scientific support to RC: within four months after the entry into force of the order form and **during the entire reporting period** n+1 New terms for catalogues: **by mid-September** New quality checks (BRs): Proposal **by end of March** Implementation **by end of May** New analysis in SAS and MicroStrategy: Proposal **by end of March** Implementation **by end of May** Creation of the codes for data extraction for trends, maps, dashboards, story maps and DataViz Proposal: **by end of March** Implementation in SAS: **by end of May**

[37] If a subcontractor provides the whole or a very large part of the financial capacity OR executes the whole or a very large part of the tasks, EFSA may demand the subcontractor to sign the contract.

	production of DataViz by another EFSA's contractor (1st, 2nd and 3rd year of the FWC).		
2	**Task: Plans of scientific data validation (for EFSA only) and of analyses (for EFSA and ECDC)** • Prepare protocols for scientific data validation and plans of analyses for 2021, 2022, 2023 and 2024 EUSR on AMR chapters, for review and approval by EFSA and ECDC. These deliverables must notably include: - detailed and relevant protocols for scientific data validation of reported data on bacteria from food and animals (EFSA data stream), underpinned by deep knowledge of the EU legislation (minimum reporting requirements), of the EFSA data collection models and of the data collection manuals, - plans for data analyses for all data (human, food and animals), - an exhaustive list of tables and figures (graphs and maps) for all chapters, for all sections (human, food and animals). **Deliverable:** Report with protocols for scientific data validation and with plans of analyses, approval by EFSA and ECDC, by email. List of tables and figures (graphs and maps) for all chapters, for all sections. From 2022 EUSR on AMR onward including plans for improvements mentioned in the 'Customer feedback report on EUSR zoonoses and AMR'[38]:	No	Within two months after the entry into force of the order form and **no later than 15 April** of reporting year n+1
3	**Task: Scientific Data Validation (for EFSA only)** To conduct the scientific validation of all AMR data on food and animals reported by RC in accordance with Decision (EU) 2020/1729, using all available information (summary tables available in the EFSA business intelligence application MicroStrategy, national zoonoses report, datasets and other relevant sources), until full agreement with RC. A two-step data validation takes place from beginning of June until approximately the end of July during which period RC have two windows of opportunity to amend their data as appropriate. More specifically (non-exhaustive list), requested tasks include: • To verify whether RC comply with minimum legal data reporting requirements; • To verify whether RC comply with minimum legal information requirements reported in the text forms; • To compare total units tested, total units positive and isolate units submitted and the monitoring results from the same rotating period looking for anomalies, outliers or implausible results or aberrations from the epidemiological point of view (taking into account historical data and all submitted contextual information), and ask for clarification to RC; • To record monitoring of scientific validation with dates, actions, etc in a validation log or monitoring template for auditing purposes;	No	Exact dates will be defined in the order form. Indicatively, data validation **between the first days of June until end of July** of reporting year n+1 List of isolates for Confirmatory Testing: **by first week of July** Selection of the relevant ESBL, AmpC and CP genes to be analysed: **by mid June**

[38] https://www.efsa.europa.eu/en/corporate/pub/eusr-report-customer-feedback

	• To store any document received by RC as part of the data collection in the EFSA DMS record repository for EUSR on AMR; • To archive all emails related to the scientific data validation in the EFSA official repository of documents and records for the EUSR on AMR. • To archive emails confirming the agreement reached after the scientific validation of the data for each RC sent and filed; • To consult EFSA's Data Unit regarding technical aspects of the email templates used (e.g. links to business intelligence application MicroStrategy with validation dashboards or reports, steps of the data collection cycle). • To verify discrepant key statistics between the EFSA data warehouse (DWH) and the published literature. • To propose a selection of isolates for analysis to be performed by the EURL-AR under the Confirmatory Testing exercise and perform the extraction of the final AMR results for those isolates, when available. • To coordinate with EURL AR when the results from the confirmatory testing are available and comparison with reported data is performed. • To perform a screening/selection of the relevant ESBL, AmpC and CP genes to be analysed to calculate the occurrence of presumptive ESBL/AmpC and CP-producers. This applies in case the AMR monitoring is performed using WGS as an alternative method to carry out the specific monitoring of ESBL- or AmpC or CP- producing E. coli. The selection of the genes should be done based on the Resfinder Database (DB) list, other relevant DBs, literature research and in liaison with the EURL-AR. **Deliverable:** Log of results and outcomes of scientific data validation, including alterations of data reported by RC to EFSA. List of isolates for the Confirmatory testing exercise to be carried out by the EURL-AR. Selection of the relevant ESBL, AmpC and CP genes to be analysed.		
4	**Task: First version of the EUSR on AMR including Plain Language Summary (for EFSA)** • To produce and deliver all tabulated outcomes of the analyses performed, including notably those corresponding to the graphs, maps and figures intended to be included in the EUSR on AMR. • To produce and deliver final analysis scripts, appropriately commented: for EFSA using SAS and the corresponding log file, as well as complete information necessary to tracing back and reproduce contractors' produced tables, maps and graphs. • To produce and deliver the first version of the EUSR on AMR 2021, 2022, 2023 and 2024. The 2021 EUSR on AMR shall follow the layout and contents (of every chapter) of the 2019/2020 EUSRs on	No	Exact dates will be defined in the order form. Indicatively **by end of September** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

	AMR[39], unless changes are agreed. Additional analyses may be needed to account for constantly evolving AMR situation and possible, newly detected AMR determinants. Care should be taken in communicating the key findings also to the thoughtful but non specialist general reader. It is expected that the contractor improves the EUSR on AMR 2022, 2023 and 2024 according to the recommendations cited in the before mentioned customer feedback report[40]. The contractor can propose changes for improvement of any EUSR on AMR during the duration of the contract, but any change proposed to the layout and content of the report must be submitted to EFSA (for food and animals' data) for approval before implementation. The discussion should take account of the wider AMR context, of the relevant findings considering the recent scientific literature as well as of EFSA's relevant scientific opinions and scientific reports. All literature references ought to be managed by Endnote file that needs to be delivered. • To produce the first version of the Plain Language Summary of EUSR on AMR 2021, 2022, 2023 and 2024. • To send the first version of the EUSR on AMR 2021, 2022, 2023 and 2024 and the first version of the Plain Language Summary of EUSR on AMR each year to the relevant Units in EFSA for review **Deliverable:** first versions of the EUSR on AMR 2021, 2022, 2023 and 2024 and of Plain Language Summary for consultation and approval by EFSA.		
5	**Task: Second version of the EUSR on AMR including Plain Language Summary (for EFSA & ECDC)** • To produce and deliver all tabulated outcomes of the analyses performed, including notably those corresponding to the graphs, maps and figures intended to be included in the EUSR on AMR. • To produce and deliver final analysis scripts, appropriately commented: for EFSA using SAS, and for ECDC, using R or Stata, and the corresponding log file, as well as complete information necessary to tracing back and reproduce contractors' produced tables, maps and graphs. • To produce and deliver the second version of the EUSR on AMR 2021, 2022, 2023 and 2024. The 2021 EUSR on AMR shall follow the layout and contents (of every chapter) of the 2019/2020	No	Exact dates will be defined in the order form. Indicatively **by end of October** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

[39] EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2021. The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019. EFSA Journal 2021;19(4):6490, 179 pp. https://doi.org/10.2903/j.efsa.2021.6490

[40] http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/Annual-EUSR-Zoonoses-Food-Report-19.pdf

	EUSRs on AMR[41], unless changes are agreed. Additional analyses may be needed to account for constantly evolving AMR situation and possible, newly detected AMR determinants. Care should be taken in communicating the key findings also to the thoughtful but non specialist general reader. It is expected that the contractor improves the EUSR on AMR 2022, 2023 and 2024 according to the recommendations cited in the before mentioned customer feedback report[42]. The contractor can propose changes for improvement of any EUSR on AMR during the duration of the contract, but any change proposed to the layout and content of the report must be submitted to EFSA (for food and animals' data) and to ECDC (for human data) for approval before implementation. The discussion should take account of the wider AMR context, of the relevant findings considering the recent scientific literature as well as of EFSA's and ECDC's relevant scientific opinions and scientific reports. All literature references ought to be managed by Endnote file that needs to be delivered. • To produce the second version of the Plain Language Summary of EUSR on AMR 2021, 2022, 2023 and 2024. • To send the second version of the EUSR on AMR 2021, 2022, 2023 and 2024 and the first version of the Plain Language Summary of EUSR on AMR or each year to the relevant Units in EFSA and in ECDC for review **Deliverable:** second versions of the EUSR on AMR 2021, 2022, 2023 and 2024 and of Plain Language Summary for consultation and approval by EFSA and ECDC (see also deliverable 9)		
6	**Task: Pre-consultation version of EUSR on AMR including Plain Language Summary (for EFSA& ECDC)** • To produce the pre-consultation (or second version) of the EUSR on AMR 2021, 2022, 2023 and 2024 and of the Plain Language Summaries, addressing the comments and suggestions by EFSA and ECDC on the first version. • To send the pre-consultation version of the EUSR on AMR 2021, 2022, 2023 and 2024 and of the Plain Language Summary of EUSR on AMR 2021, 2022, 2023 and 2024 to the relevant Units in EFSA and in ECDC for review and approval. **Deliverable:** pre-consultation versions of EUSR on AMR 2021, 2022, 2023 and 2024 and of Plain	No	Two weeks after receiving the draft EUSR on AMR commented by EFSA and ECDC **by end of November** of reporting year n+1 (exact dates will be defined in the order form) In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

[41] EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2021. The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2018/2019. EFSA Journal 2021;19(4):6490, 179 pp. https://doi.org/10.2903/j.efsa.2021.6490

[42] http://www.efsa.europa.eu/sites/default/files/corporate_publications/files/Annual-EUSR-Zoonoses-Food-Report-19.pdf

	Language Summaries for review and approval by EFSA and ECDC (see also deliverable 9)		
7	**<u>Task</u>: Post-consultation version of 2021, 2022, 2023 & 2024 EUSR on AMR including Plain Language Summary (for EFSA& ECDC)** • To provide to and ask for review of the pre-consultation versions of the EUSR on AMR 2021, 2022, 2023 and 2024 and of the Plain Language Summaries to RC and stakeholders of EFSA and of ECDC (two-weeks period). • To address all the comments by RC and by stakeholders. • To inform EFSA's Data Unit about data requiring amendment in EFSA's Scientific DWH. • To inform ECDC about data requiring amendment in TESSy • To produce files with tables and figures with additional data that are part of the EUSR on AMR for publication in Zenodo. • To produce the post-consultation version of the EUSR on AMR 2021, 2022, 2023 and 2024 and of the Plain Language Summary of EUSR on AMR 2021, 2022, 2023 and 2024. **<u>Deliverable</u>:** Post-consultation version of the EUSR on AMR 2021, 2022, 2023 and 2024 and of the Plain Language Summary to be approved by EFSA and ECDC via e-mail.	No	Exact dates will be defined in the order form. Indicatively **by mid-January** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
8	**<u>Task</u>: Documenting the Consultation of Networks (for EFSA & ECDC)** • To archive all consultation e-mails and exchanges with RC and stakeholders**.** **Deliverable:** Results of consultation (Log) and emails from RC and stakeholders from EFSA and ECDC confirming agreements and changes made	No	Exact dates will be defined in the order form. Indicatively **10 days after the end of the consultation** of reporting year n+1
9	**<u>Task</u>: Language review (for EFSA only)** • To carry out a language review of the EUSR on AMR 2021, 2022, 2023 and 2024 including the Plain Language Summary and harmonisation of terminology across sections. **<u>Deliverable</u>:** Certificate of review of high-quality English (this deliverable 9 should accompany deliverable 6)	No	Exact dates will be defined in the order form. Indicatively **by end-November** of reporting year n+1 (on the version that will be sent for consultation) In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
10	**Task: Communication (for EFSA and ECDC)** • To liaise with the relevant scientific and communication units in EFSA and ECDC to support the planned communication activities at the publication and post-publication of the report for the dissemination of its content	No	Exact dates will be defined in the order form. Indicatively **between January-March** of reporting year n+2 In the 2nd, 3rd and 4th years of the FWC, this deadline

	• To prepare a summary of the main findings on AMR for some specific countries requested by the Communication unit in EFSA • To prepare presentations with the main findings on AMR for the different zoonotic and indicator bacteria in the different animal populations and derived meat **Deliverable:** Reviewed plan of communication activities with EFSA's and ECDC's relevant units. Summary of the main findings on AMR for some specific countries. Presentations on main findings.		could undergo a change requested by EFSA
11	**Task: Post-publication activities (for EFSA and ECDC)** • To address comments received from members of the public or stakeholders via ASK EFSA or from RC via any other functional mailbox and to reply to them. • If post-publication errors or inaccuracies are identified by the contractor, EFSA, ECDC or stakeholders, and require re-publication in agreement with EFSA and ECDC: to make the necessary changes and submit the new version to EFSA and ECDC for review and approval by e-mail for re-publication **Deliverable (optional):** final version of the amended EUSR on AMR 2021,2022, 2023 and 2024, if necessary.	No	As necessary at any time during the execution of the order form
12a	**Task: Briefing document updating the EFSA Zoonoses Monitoring Data network (for EFSA only)** • To prepare a comprehensive briefing document for the annual meeting of the EFSA Zoonoses Monitoring Data network (AMR group) outlining: draft main findings of EUSR on AMR 2021, 2022, 2023 and 2024, the milestones to produce the EUSR on AMR 20XX +1, the needs for improving the scientific quality of the data submitted and any proposals for finetuning the reporting. **Deliverable:** Documents (e.g. text files, slides, other) intended to be subsequently shared with the EFSA Zoonoses Monitoring Data Network (AMR group) prior to its annual meeting, to be approved by EFSA in advance.	No	Exact dates will be defined in the order form. Indicatively **by the end of October** of reporting year n+1
12b	**Task: Presentation at meeting/workshop for the FWD-Net (for ECDC only)** • To prepare slides and related documents for an AMR meeting or workshop with the FWD-Net: main findings of the most recent EUSR on AMR, milestones for the next EUSR on AMR, data quality issues and proposals for analysis and display of data. • To attend the meeting/workshop (physical or virtual) and lead the discussion with the network on these topics	No	To be requested twice during the contract period. Exact dates will be defined in the order form but indicatively for a meeting/workshop held in April

	Deliverable: Slides and related documents intended to be subsequently shared with the FWD-Net (AMR group) prior to its meetings, to be approved by ECDC in advance.		
Work package 2			
13	**Task: Requirements analysis and prototypes for AMR dashboards and story maps (for EFSA only)** • To conduct and deliver a requirements analysis for the AMR dashboards, DataViz and story maps to be built, at the start of every year. Such analyses must include proposals on how to best source relevant data from the EFSA DWH, for delivery of expected outcomes. This plan shall include formal and technical checking and testing in order to ensure global consistency and coherence as well as proper functioning on the relevant platform(s). • To propose some prototypes of AMR dashboards, DataViz and story maps from which EFSA can select the most suitable ones to be produced. **Deliverable:** Requirement analysis report and prototypes for review and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively requirement analysis: **by end of April** of reporting year n+1 Prototypes: **by end May**
14a	**Task: First version of online interactive AMR data visualisation dashboards, including DataViz (for EFSA only)** • To produce the first version of the online interactive data visualisation dashboards (see table 1 under 1.2 Objectives), displaying aggregated monitoring results related to AMR • To provide the first version of the online interactive data visualisation dashboards to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** First version of online interactive data visualisation dashboards for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by mid-July** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
14b	**Task: Second version of online interactive AMR data visualisation dashboards (for EFSA only)** • To produce the second version of the online interactive data visualisation dashboards (see table 1 under 1.2 Objectives) displaying aggregated monitoring results related to AMR, addressing the comments and suggestions by EFSA on the first version	Yes	Exact dates will be defined in the order form. Indicatively **by end of August** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

	• To provide the second version of the online interactive data visualisation dashboards to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** Second version of online interactive data visualisation dashboards for consultation and approval by EFSA by email		
14c	**Task: Third version of online interactive AMR data visualisation dashboards (for EFSA only)** • To produce the third version of the online interactive data visualisation dashboards (see table 1 under 1.2 Objectives) displaying aggregated monitoring results related to AMR, addressing the comments and suggestions by EFSA on the second version • To provide the third version of the online interactive data visualisation dashboards to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** Third version of online interactive data visualisation dashboards for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by mid-September** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
14d	**Task: Pre-consultation version of online AMR interactive data visualisation dashboards (for EFSA only)** • To produce the pre-consultation version of the online interactive data visualisation dashboards (see table under 1.2 Objectives), addressing the comments and suggestions by EFSA on the third version • To provide the pre-consultation version of the online interactive data visualisation dashboards to the relevant Units in EFSA for review and approval • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** Pre-consultation version of online interactive data visualisation dashboards for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by the end of November** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
14e	**Task: Post-consultation version of online AMR interactive data visualisation dashboards (for EFSA only)** • To provide to and ask for review of the pre-consultation versions of dashboards to RC and stakeholders of EFSA (and of ECDC and stakeholders upon agreement) (two-weeks period).	Yes	Exact dates will be defined in the order form. Indicatively **by mid-January** of reporting year n+2 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

	• To address all the comments by RC and by stakeholders • To produce the post-consultation versions of the dashboards • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** Post-consultation online interactive data visualisation dashboards to be approved by EFSA by email		
14f	**Task: Yearly maintenance and data updates of dashboards (for EFSA only)** • To maintain and update, on a yearly basis, the dashboards with most recent data • To provide tabulated outcomes and analysis script corresponding to the figures/graphs/schema shown on dashboards **Deliverable:** Pre-consultation version of online interactive data visualisation dashboards for consultation and approval by EFSA by email.	Yes	Exact dates will be defined in the order form. Indicatively **by end of November** of reporting year n+1
15	**Task: Documenting the consultation of online interactive AMR data visualisation dashboards (for EFSA only)** • To archive emails confirming comments during consultation of RC and of stakeholders of EFSA (and of ECDC and stakeholders upon agreement) **Deliverable:** Results of consultation and emails from RC and stakeholders from EFSA and ECDC confirming agreements and changes made	No	Exact dates will be defined in the order form. Indicatively **by end of December** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
16a	**Task: First version of interactive online AMR story maps, (for EFSA only)** • To produce the first version of interactive online AMR story maps (see table 1 under 1.2 Objectives), displaying aggregated monitoring results related to AMR • To provide the first version of interactive online AMR story maps to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the maps/figures shown on story maps **Deliverable:** First version of online interactive AMR story maps for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by mid-July** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
16b	**Task: Second version of interactive online AMR story maps, (for EFSA only)** • To produce the second version of interactive online AMR story maps (see table 1 under 1.2 Objectives) displaying aggregated monitoring results related to AMR, addressing the comments and suggestions by EFSA on the first version	Yes	Exact dates will be defined in the order form. Indicatively **by end of August** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline

	• To provide the second version of interactive online AMR story maps to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the maps/figures shown on story maps **Deliverable:** Second version of online interactive AMR story maps for consultation and approval by EFSA by email.		could undergo a change requested by EFSA
16c	**Task: Third version of interactive online AMR story maps, (for EFSA only)** • To produce the third version of interactive online AMR story maps (see table 1 under 1.2 Objectives) displaying aggregated monitoring results related to AMR, addressing the comments and suggestions by EFSA on the second version • To provide the third version of the interactive online AMR story maps to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the maps/figures shown on story maps **Deliverable:** Third version of online interactive AMR story maps for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by mid-September** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
16d	**Task: Pre-consultation version of interactive online AMR story maps (for EFSA only)** • To produce the pre-consultation of interactive online AMR story maps (see table 1 under 1.2 Objectives) displaying aggregated monitoring results related to AMR, addressing the comments and suggestions by EFSA on the third version • To provide the pre-consultation version of the interactive online AMR story maps to the relevant Units in EFSA for review • To provide tabulated outcomes and analysis script corresponding to the maps/figures shown on story maps **Deliverable:** Pre-consultation version of AMR story maps for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by the end of November** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
16e	**Task: Post-consultation version of online interactive AMR story maps (for EFSA only)** • To provide to and ask for review of the pre-consultation versions of AMR story maps to RC and to stakeholders of EFSA (and of ECDC upon agreement) (two-weeks period). • To address all the comments by RC and by stakeholders • To produce the post-consultation versions of AMR story maps	Yes	Exact dates will be defined in the order form. Indicatively **by mid-January** of reporting year n+2 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA

	Deliverable: Post-consultation online interactive AMR story maps to be approved by EFSA by email		
16f	**Task: Yearly maintenance and data updates of interactive online AMR story maps (for EFSA only)** • To maintain and update, on a yearly basis, the AMR story maps with most recent data **Deliverable:** Updated AMR story maps for consultation and approval by EFSA by email	Yes	Exact dates will be defined in the order form. Indicatively **by end of November** of reporting year n+1
17	**Task: Consultation of online interactive AMR story maps (for EFSA only)** • To archive emails confirming comments during consultation of RC and of stakeholders of EFSA (and of ECDC upon agreement) **Deliverable:** Results of consultation and emails from RC and stakeholders from EFSA and ECDC confirming agreements and changes made	No	Exact dates will be defined in the order form. Indicatively **by end of December** of reporting year n+1 In the 2nd, 3rd and 4th years of the FWC, this deadline could undergo a change requested by EFSA
Work package 3			
18	**Task: Project management and communication (for EFSA & ECDC)** **Deliverables:** Project coordination • Project management, yearly administrative report providing a check list and brief summary of executed tasks performed during an order form. • The Project Leader will make sure at the start of every year of contract that the policies for operation (e.g. use of document management system of EFSA for archiving documents, data, data visualisations, codes, other) are agreed by all parties involved. • Kick-off meeting, final meeting, three specific meetings for WP 1 and three specific meetings for WP 2 organised. In the case of sub-contractor in WP2, the sub-contractor should be present at the specific meetings of WP2. Organising the meeting, drafting the agenda, drafting the minutes. The minutes should be provided by the contractors maximum 3 working days after the meeting. • Regular (minimally monthly) updating web-meetings with EFSA: Organising the meeting, drafting the agenda and briefing notes/minutes of the teleconferences. The minutes should be provided by the contractors maximum 3 working days after the meeting. • Ad-hoc meetings with EFSA and ECDC: Organising the meeting, drafting the agenda, drafting the minutes. The minutes should be provided by the contractors maximum 3 working days after the meeting.	No	Annually for the whole duration of order form

	• Regular updating web-meetings with disease expert(s) in ECDC needed when human data are analysed and the chapters are written. Organising the meeting, drafting the agenda, drafting the minutes. The minutes should be provided by the contractors maximum 3 working days after the meeting. • Participation in the meetings of the EFSA Network for Zoonoses Monitoring (one meeting per year) • Participation in meetings of the FWD-Net (AMR group) (twice during the contract period)		

No.	Meetings	Deadline for finalisation
1	**Kick-off meeting**: Physical meeting (two days) in Parma (or teleconference if travel restrictions apply due the COVID 19 situation): during this meeting, in addition to operational implementation, administrative and financial matters related to contract implementation will be discussed[43]	1 month after entry into force of the order form and/or **not later than end of February** of reporting year n+1
2	**Interim meetings**: Six physical meetings (one day each) (or teleconference if travel restrictions apply due the COVID 19 situation): to discuss a) for WP 1: the plans of data validation, of analyses, and of improvements, and to review first draft, second draft and briefing for the ZMD network; and b) for WP 2: the requirements analyses, and first and third versions of the dashboards and story maps.	3 and 8 months after entry into force of order forms and **not later than 30 April and 31 October** of reporting year n+1
3	**Monthly teleconference** to discuss the progress and agree on solutions for problems that occurred during the implementation of the project	Starting from 2 months after entry into force of the order form onwards
4	**Final meeting**: Physical (one day) meeting (or teleconference if travel restrictions apply due the COVID 19 situation): to discuss and review the final report to be published report and activities of the year	11 months after entry into force of the order form, within the month before the publication of the report

Payments
The payment modalities applicable to each order form are detailed in the draft framework contract.

The working language for contract implementation including execution of tasks, meetings and deliverables shall be English. Any written deliverables must be of a high standard of English which does not require proof reading, except for Deliverable 6 that needs to be delivered with an accompanying certificate of a language check (proof reading as deliverable 9).

[43] One day = 8 hours, half day = 4 hours

1.4 INFORMATION ON THE CONTRACT

Nature of expense services

Type of contract framework (FWC)

Type of FWC single FWC

Place of performance: contractor's premises

Duration of FWC
One year + automatic/non-automatic renewal up to 3 times for an overall maximum duration of four consecutive years.

Budget information
The financial ceiling available for order forms under the framework contract during an overall maximum period of 4 consecutive years is **2,048,550 €.** A contingency of 10% and possible price indexations are already included in this ceiling.

Possible increase of FWC envelope
In accordance with Annex I, Section 2, article 11.1 e) of the Financial Regulation, EFSA reserves the right to launch a future negotiated procedure with the contractor chosen as a result of this call for tender, for new services consisting in the repetition of similar services during the three years following the signature of the original framework contract. The increase will not go beyond 50% of the original envelope of 2,048,550 €.

Price indexation
The mechanism for the indexation of prices is set out in the draft framework contract.

Framework contract implementation modalities

The EU Bodies will require the services on an annual basis as described in these tender specifications. The exact timetable for receiving deliverables will be set out in each order form according to the estimated timelines indicated in the table of section 1.3.

The framework contract will be implemented through order forms. Every time there is a need for a service/activity, the EU bodies will request to the contractor an offer based on the prices agreed under the framework contract in Annex 1. Once the estimate provided by the contractor is accepted by the EU Body, an order form will be concluded between the EU Body and the contractor. The order form will set out the specific conditions for performing the individual assignment.

The contractor will have 5 working days to sign and return the relevant Order Form. When returning the order form, the contractor should confirm the name of the individual(s) [44] responsible for performance of tasks under the Order.

The Service Level Agreements and penalties of section 1.2.1 will be applied to measure the quality and compliance with pre-defined deadlines.

1.5 OWNERSHIP, INTELLECTUAL PROPERTY RIGHTS, USE OF RESULTS

As regards any product or delivery commissioned by EFSA and developed by the contractor in the context of the contract resulting from this call for tenders, as well as source codes of IT applications and models developed for EFSA, the intellectual property rights will be owned by EFSA only in its capacity as financial source of the contract. The contractor cannot file a trademark, patent, copyright or other IPR protection scheme in relation to any of the results or rights obtained by EFSA in performance of the contract, unless the contractor requests EFSA ex-ante authorisation and obtains from EFSA a written consent in this regard.

In addition, the contractor selected as a result of the present procurement procedure shall be solely responsible and liable for the following:

- To ensure that terms and conditions asserted by any copyright holder of publications or information referred to in the final deliverable for EFSA are fully satisfied;
- To make the necessary arrangements enabling EFSA to reproduce and make non-commercial use of publications and information referred to in the final deliverable it commissioned. As needed, the contractor shall consult with copyright licensing authorities (i.e. at national level) for guidance on purchasing copyright licenses to reproduce any publications provided to EFSA. The contractor remains solely responsible and liable for obtaining all necessary authorizations and rights to use, reproduce and share the publications provided to EFSA

PARTS OF RESULTS PRE-EXISTING THE CONTRACT

If the results are not fully created for the purpose of the contract this should be clearly pointed out in the tender. Information should be provided about the scope of pre-existing materials, their source and when and how the rights to these materials have been or will be acquired.

EFSA does not acquire ownership or any license of pre-existing rights not incorporated in the deliverables. The full ownership is limited to the deliverables, which might include licensed pre-existing rights on excerpts, parts, texts etc., if fully or partially incorporated in the final deliverables.

[44] In the event that the named individual(s) did not already have their CV(s) assessed prior to signature of the FWC, the CV(s) of the new individual(s) should be submitted and will be subject to the assessment by EFSA of the technical and professional capacity requirements in section 2.4.B and screening of declaration of interest.

The draft contract in Annex 2 contains further provisions on ownership of intellectual property rights. All quotations or information the tenderer provides in the technical and financial offer for EFSA which originates from other sources to which third parties may claim rights, have to be clearly marked in the offer in a way allowing easy identification (source publications, including date & place, creator, number, full title etc.). The tenderer shall take account of the above specification on ownership and copyrights in their technical and financial offer.

Use of results
EFSA is committed to the publication of contract deliverables in the Knowledge Junction in order to improve transparency, reproducibility and evidence reuse. The Knowledge Junction[45] runs on the EU-funded Zenodo research-sharing platform where uploaded items receive a unique Digital Object Identifier to make them citable. Any part of the output resulting from this contract may be published (at EFSA's discretion) on the Knowledge Junction with attribution to the contractor.

1.6 PERSONAL DATA

Processing of personal data by EFSA as contracting authority
Information on the processing of personal data by EFSA as contracting authority in charge of the present procurement procedure is available in the Privacy Statement on the EFSA website as well as in Article II.9.1 of the draft contract in Annex 2.

Please note that your personal data as a tenderer or selected contractor may be registered in the Early Detection and Exclusion System (EDES) if you are in one of the situations mentioned in Article 136 of the Financial Regulation. The relevant Privacy Statement is available on the European Commission's website, here: http://ec.europa.eu/budget/explained/management/protecting/protect_en.cfm#BDCE.

Processing of personal data by the selected contractor
In case tasks and activities under this call relate to the processing of personal data, Article II.9.2 of the draft contract in Annex 2 shall be observed.

For further information on data protection, please refer to the **EFSA guidance for tenderers** on the EFSA website, page 13.

1.7 CONFIDENTIALITY

EFSA will disregard general statements that the whole tender or substantial parts of it contain confidential information. Tenderers need to mark clearly the information they consider confidential and explain why it may not be disclosed. EFSA reserves the right to make its own assessment of the confidential nature of any information contained in the tender.

[45] Learn more at http://www.efsa.europa.eu/en/press/news/161114

In the context of the tasks and deliverables under the contract, i.e. the data collection and validation tasks detailed in point 1.3 above, the selected contractor may need to process confidential information of EFSA. As concerns confidential information, the contractor, consortium partners and any allowed subcontractors must fully adhere to Article I.15.4 and Article II.8 of the Contract (Annex 2). This implies that such confidential information, data or documents may be used solely for the purpose of performing the tasks required under the contract or to follow-up on instructions given by EFSA. The protection of confidential information, data or documents shall be ensured anytime, also after deliverables have been provided and the contract is terminated. Confidential information cannot be disclosed to third parties without the prior written agreement of EFSA.
EFSA will require personalized confidentiality declarations from individuals working on specific tasks or deliverables under the contract, according to the model provided in Annex 3.

PART 2 EVALUATION - HOW WILL YOUR OFFER BE ASSESSED?

In case you apply as a group of economic operators in a joint offer or if your offer envisages the use of subcontractors, please refer to the **EFSA Guidance for tenderers**.

2.1 OPENING OFFERS

The aim of the public opening session is to check whether the offer received was dispatched by the deadline for tender receipt and that the tenders are electronically protected until the official opening.

2.2 ORDER OF EVALUATION

Tenderers should note that the content of their offers will be assessed in the following pre-defined order: Exclusion criteria (Access to EU Market); Selection criteria (Technical & Professional capacity); Compliance with tender specifications; Award Criteria (Quality and Price).

Following the above assessment and identification of the winning tender, the following will be assessed only for the tenderer proposed for contract award: Selection criteria Professional Conflict of Interest – Institutional and Individual Declarations of Interest); Exclusion criteria (Declaration on Honour on exclusion criteria); Selection criteria (Declaration on Honour on selection criteria); Selection criteria (Economic & Financial capacity).

Evidence under sections 2.3 and 2.4 does not have to be submitted to EFSA if it has already been submitted in response to a previous EFSA call. In such case the evidence must be exactly the same as requested in these tender specifications and not older than 12 months. Please specify the reference of the EFSA call for tenders under which you have already submitted the evidence to EFSA if you chose to rely on such evidence.

2.3 GROUNDS FOR EXCLUSION

Eligibility – access to EU Market

Only offers from tenderers established in eligible countries will be allowed to the next step of the evaluation. Please refer to the **EFSA Guidance for tenderers** for further details.

> ***Evidence requested in your offer:***
> Tenderers must submit the Administrative data forms (including LEF and BAF) available here.

Exclusion

Tenderers must not be in one of the exclusion situations listed in article 136 of the Financial Regulation, explained in the **EFSA Guidance for tenderers**.

> ***Evidence requested in your offer:***
> Tenderers must declare that they are not in one of the exclusion situations by providing a signed and dated Declaration on Honour on exclusion criteria, available here. In case of a joint offer from a group of economic operators, or in case of

subcontracting, such declaration should be submitted for each member of the group and for each identified subcontractor.

Further supporting evidence in support of this declaration may be requested from the successful tenderer prior to signature of the contract. Such requested evidence will be specified in the award letter and may have to be provided to EFSA before the contract is signed.

2.4 SELECTION CRITERIA

In addition to the evidence requested below, EFSA has the right, during the evaluation process, to request further evidence on the tenderer's compliance with the economic, financial, technical and professional capacity requirements.

A) Economic and financial capacity

The tenderer must have generated an overall annual turnover of at least 1,000,000 € in each of the last 2 closed financial years (2019 and 2020).

Evidence requested in the offer:

Tenderers must declare they fulfil the economic and financial capacity by providing a signed and dated Declaration on Honour on selection criteria, available here. In case of a joint offer from a group of economic operators, such declaration should be completed by the leading partner only.

EFSA will request proof of annual turnover from the successful tenderer prior to signature of the contract. Such requested evidence will be specified in the award letter and must be provided to EFSA before the contract is signed. This evidence will be evaluated on a consolidated basis.

During contract implementation, in case of request for the addition of new subcontracting or assignment of the contract to a new legal entity, the economic and financial capacity will be checked for the last 2 most recent closed financial years and not necessarily the financial years published with the call.

B) Technical and professional capacity

The tenderer must have the following **minimum professional capacity** to perform the contract deliverables of the **Work package 1** under each order form:

a) Extensive and demonstrable experience:

- in AMR in the following zoonotic and indicator bacteria: *Salmonella, Campylobacter*, indicator *E. coli*, ESBL-, AmpC- and/or carbapenemase-producing *Salmonella* and *E. coli*, Methicillin-resistant *Staphylococcus aureus* and its epidemiology in humans and animals and the occurrence of AMR along the food chain;
- related to the above-mentioned zoonotic and indicator bacteria: surveillance and control and AMR monitoring in the EU, EU legislation (public health and food safety), laboratory analytical methods (classical and molecular methods) in the EU context;

- in data collection, data validation, data processing, data management, data visualisation and epidemiological/statistical analysis (including trend analysis and including the use of geographical information systems) of AMR survey, monitoring and surveillance data, and of public health, food safety, veterinary sectors in the EU context;

b) Ability to provide and coordinate a multidisciplinary team of experts compliant with these specific expertise requirements (profiles):

- **Experts (one person can cover more than one profile)** in *Salmonella, Campylobacter,* indicator *E. coli,* ESBL-, AmpC- and/or carbapenemase-producing *Salmonella* and *Escherichia coli,* Methicillin-resistant *Staphylococcus aureus*, in humans, food and animals with a University degree in Medicine or Microbiology or Food Sciences or Veterinary Science or Bio-engineer or Biomedical Science or an equivalent of these.
  - b.1 At least 5 years of experience in all the fields described above and the monitoring and surveillance of AMR in the EU, as demonstrated with relevant publications.
  - b.2 At least 5 years of experience in data management including processing and analysis of spatial information, and the production of maps.
  - b.3 At least 5 years of experience in statistics (quantitative modelling, regression modelling) with a University degree in epidemiology/statistics with a very good knowledge of SAS and STATA or equivalent software
  - b.4 At least 5 years of experience in veterinary public health (veterinary epidemiology and food safety) and public health epidemiology with a University degree in epidemiology
  - b.5 At least 2 years of experience in the One Health approach, as demonstrated with relevant publications.
  - b.6 A **Team leader** with at least 5 years of experience in international project management, including planning, coordination, project analysis, development and implementation, project monitoring, and project status reporting. He/she should have at least C1 level in the Common European Framework for Reference for Languages in English. (e.g. http://www.coe.int/t/dg4/linguistic/Cadre1_en.asp)

c) The team of experts must each have individually an excellent level of spoken and written standard UK English. For non-native speakers, this should be demonstrated by an Official certificate of English proving a C1 level OR at least 3 years of work in an English-speaking environment.

The tenderer must have the following **minimum technical capacity** to perform the contract deliverables of the **Work package 1** under each order form:

d) For analysing data from EFSA,
  - the tenderer must have access to SAS 9.4 software. EFSA currently uses MicroStrategy, SAS 9.4 and SAS Enterprise Guide 5.1 for analysing AMR data [46]

[46] Schmidtke, J., Schmidt, K.; Standardised statistical programming practices for R and SAS. Supporting Publications 2013:EN-390. [39 pp.]. Available online: http://www.efsa.europa.eu/en/supporting/doc/390e.pdf

- Statistical analyses must be developed using SAS 9.4[47].

e) For analysing data from ECDC,
- the tenderer must have access to STATA or to R (or RStudio). ECDC currently uses R version 4.0.0 and STATA 16

f) The tenderer must be able to ensure that any information or documents related to the implementation of the contract is treated as confidential, including circulation on a need to know basis only to experts actually working on the project and only for the time required to deliver their respective tasks

The tenderer must have the following **minimum professional capacity** to perform the contract deliverables of the **Work package 2** under each order form:

g) Extensive and demonstrable experience in the development of online interactive data visualisation dashboards and of presentation of information in story maps, where complex scientific data is presented in user friendly and easy to digest formats.

Demonstrable professional experience and in-depth knowledge working in:

- Design and development of static and interactive infographics, and information/data visualisation products,
- Graphic design, responsive web design and accessibility,
- JavaScript, HTML 5 and CSS 3,
- Data visualisation principles and programming languages and libraries such as D3; and;
- Knowledge and use of MicroStrategy and Power BI and its features;

Knowledge of (to be proven via studies, training, certifications/diplomas/degrees, etc.):
- Graphic design, user interface design, human computer interaction,
- Data and information visualisation strategies, tools and technologies.

h) Ability to provide and coordinate a team of experts compliant with these specific expertise requirements (profiles):

- h.1 Web Designer: at least 5 years of experience in web design (e.g. creating the look, graphic layout, and features) and computer programming related to the fields described above
- h.2 Web Developer: at least 5 years of experience in web development related to the fields described above. Knowledge of common programming languages (HTML, Javascript, CSS) is required, as well as knowledge of the business intelligence application Microstrategy (ver. 10 or above version) and its features
- h.3 Digital Communication Strategist: at least 5 years of experience in digital communication strategy, research and digital tools and interactive trends, related to the fields described above

[47] unless upon specific request from EFSA or contingent force majeure and must be written following the Standardised statistical programming practices for R and SAS.

- h.4 **Team leader** with at least 5 years of experience in international digital communication project management, including planning, coordination, requirements analysis, project analysis, development and implementation, project monitoring, and project status reporting.

i) The team of experts must each have individually an excellent level of spoken and written standard UK English. For non-native speakers, this should be demonstrated by an Official certificate of English proving a C1 level OR at least 3 years of work in an English-speaking environment.

The tenderer must have the following **minimum technical capacity** to perform the contract deliverables of the **Work package 2** under each order form

j) Access to the following software/tools:

- Data visualisation products; and;
- Graphic design, responsive web design and accessibility; and;
- JavaScript, HTML 5 and CSS 3; and;
- Data visualisation principles and programming languages and libraries such as D3; and;
- Access to the business intelligence application MicroStrategy (ver. 10 or above version) and Power BI and its features,
- Access to ArcGIS ver. 10.2 or above version

k) The tenderer must be able to ensure that any information or documents related to the implementation of the contract is treated as confidential, including circulation on a need-to-know basis only to experts actually working on the project and only for the time required to deliver their respective tasks

To achieve deliverables in the **Work package 3**, a Project manager shall be assigned to perform tasks under each Order form

l) l.1 **Project Leader**: should have a minimum of 5 years of experience in the coordination of international projects with scientific reporting and digital communication deliverables, including overseeing project delivery, quality control of delivered service, client orientation and conflict resolution experience in project of at least €50,000 and covering at least three countries, with experience in management of team of at least 10 people. The project Leader should have at least C1 level in the Common European Framework for Reference for Languages in English (e.g. http://www.coe.int/t/dg4/linguistic/Cadre1_en.asp);
The project manager shall be available for monthly progress meetings/teleconference with EFSA. A back up shall also be nominated. The Project Leader is assisted by the WP 1 Team Leader and by the WP 2 Team Leader

Evidence requested in the offer:

□**For minimum requirements WP 1 a):** A list of relevant projects (research or routine work) for every zoonosis/subject area mentioned, carried out in the course of the past 5 years. Please fill in **the table 2.A found in Annex 4** with the name/title of the project, the years-range for the project execution (start-end), a brief explanation of the project (to be annexed) including links to published project outputs. The minimum requirement is to provide at least one project in every zoonosis/subject area.

□**For requirements WP 2 g):** A record (portfolio) that demonstrates:
- Experience in the design and development of a number of **static infographics.** These products should explain complex information/data using visual techniques and effective storytelling including scientific topics;
- Experience in the design and development of a number of **interactive products** (from simple dynamic visualisations to more complex interactive data visualisations), such as interactive dashboards and story maps, and clear explanation of the technology used and the rationale behind it. All the characteristics below should be covered overall by the interactive products presented:
a) Use of various types of visualisations based on the users' preference: e.g. selection of different variables, filters, use of diverse geographic location, comparison of trends over time, customisation of indicators to obtain personalised results, etc.;
b) Use of the latest technologies (including scrollable pages with parallax effects, use of JavaScript, HTML 5 and CSS 3);
c) Use of techniques to maximize cross-browser/resolution compatibility

Please, fill in **the table 2.B found in Annex 4** with the name/title of the data visualisation products, the years/range for the product development (start-end), a brief description of the product (to be annexed) including links to published products. The brief description should clearly describe the characteristics of the products (e.g. target audience, communication objective, implemented features and techniques, etc.). When links to online resources cannot be provided, relevant screenshots should accompany the description.

□**For minimum expertise requirements WP 1 b) c) and WP 2 h) i) and WP 3 l):**

Detailed CVs of all team members proposed for the assignment, describing the minimum expertise requirements detailed above; EFSA strongly recommends submitting the CVs in the EU CV format which can be accessed here. The tenderer must also complete and provide the **table 3 found in Annex 4** indicating which CV is proposed for which profile as requested under requirements b) and h). In addition, the tenderer must indicate how each CV is compliant with the language requirements under requirements c) and i).

Evidence must be included in the offer for partners in a joint offer and/or subcontractors only if the capacity of those entities is necessary to satisfy the minimum technical and professional capacity requirements.

□**For minimum requirements WP 1 d), e) and WP 2 j):** A statement confirming to have access to all the software indicated in requirements d), e) and j)

□**For minimum requirements WP 1 f) and WP 2 k) and WP 3 l)**: Confidentiality declaration signed by the experts proposed for the assignment (template available in Annex 3);

□ **Declaration on Honour on selection criteria** available here. To be signed by the tenderer (in case of joint offer signed by the leading partner only);
□ **Confirmatory statement of resources** (*only applicable for joint offers or offers with subcontracting*): a statement signed by each partner/subcontractor confirming they will provide the necessary resources for the performance of the contract.

C) Professional conflicting interest

In accordance with article 167(1)(c) of the Financial Regulation and paragraph 104 of the recitals, if EFSA, based on the assessment of the technical and professional capacity evidence, concludes that the tenderer has a professional conflicting interest and therefore does not possess the professional capacity to perform the contract to an appropriate quality standard, the tenderer may be rejected.

Evidence requested in the offer:
The tenderer proposed for contract award will be requested, prior to and as a condition of contract signature, to provide:
Institutional declaration of interests available here In case of a group of economic operators and/or in case of subcontracting, such declaration will need to be completed separately and submitted for each partner and for each identified subcontractor and;
Individual declarations of interests available here for each member of the proposed project team.

Institutional and Individual DoIs do not need to be provided with your offer. The requirement to submit Institutional and Individual DoIs will be specified in the award letter and will have to be provided and assessed by the EFSA Authorising Officer before and as a condition of contract signature. Please refer to EFSA's policy on independence and the Decision of the Executive Director on Competing Interest Management for detailed information.

With the exception of declarations of interest, evidence must be included in the offer for partners in a joint offer and/or subcontractors only if the capacity of those entities is necessary to satisfy the minimum economic, financial, technical and professional capacity requirements.

If any of the declarations or information provided proves to be false, EFSA may impose administrative sanctions (exclusion or financial penalties) on the entity providing the false declarations/information.

For the purposes of the evaluation related to exclusion and selection criteria EFSA may also refer to publicly available information, in particular evidence that it can access on a national database free of charge.

2.5 COMPLIANCE WITH TENDER SPECIFICATION AND MINIMUM REQUIREMENTS

Your offer will be assessed for compliance with the tender specifications before its assessment against the award criteria.

Tenders do not comply with the tender specifications and will be rejected if they:

- do not comply with minimum requirements laid down in the tender specifications;
- propose a solution different from the one imposed;
- propose a price above the fixed maximum set in the specifications;
- are submitted as variants, when the specifications do not authorise them;
- do not comply with applicable obligations under environmental, social and labour law established by Union law, national law and collective agreements or by the international environmental, social and labour law provisions listed in Annex X to Directive 2014/24/EU[48] and compliance with data protection obligations resulting from Regulation (EU) 2016/679 and Regulation (EU) 2018/1725[49].

The grounds for rejection are not linked to the award criteria so there is no evaluation. The tenderer will be informed of the grounds for rejection without being given feedback on the content of the tender other than on the non-compliant elements.

2.6 AWARD CRITERIA

Tenders will be evaluated against the below award criteria. The award criteria serve to identify the **most economically advantageous offer**.

A) QUALITY AWARD CRITERIA

1. **METHODOLOGY PROPOSED FOR IMPLEMENTATION (50 points - minimum threshold 70%)**
   - Convincing justification of the choice of proposed methodology; advantages and disadvantages; **25 points**
   - Logical and structured step by step explanation of methodology; **25 points**
2. **MEASURES TO MEET DEADLINES TO GUARANTEE ON TIME DELIVERABLES (20 points - minimum threshold 70%)**
   This is to assess the mechanisms put in place in order to guarantee availability of contractor for assignment and to meet the agreed deadlines for deliverables:
   - Measures to ensure availability of proposed team members and mitigation strategies to cover absences; **10 points**
   - Measures proposed to ensure the meeting of the deadlines; **10 points**

[48] OJ L 94 of 28.03.2014, p. 65
[49] Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of individuals with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data and repealing Regulation (EC) No 45/2001 and Decision No 1247/2002/EC, OJ L 295/39 21.11.2018, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R1725&from=EN

3. **PROJECT ORGANISATION (20 points – minimum threshold 50%)**
   - Clear and detailed information on distribution of the tasks among the project team; in case of joint offer & subcontractors, clarity on who does what, when and why (justify why the partner/subcontractor is proposed to do the particular task/work-package); **5 points**
   - Management of the three Work packages; **5 points**
   - The internal team communication; in case of joint offers & subcontractors also the communication between joint offers partners and subcontractors; and communication with EFSA and ECDC (who, how, when); **10 points**

4. **MEASURES TO GUARANTEE QUALITY OF DELIVERABLES (10 points - minimum threshold 50%)**
   This is to assess the quality assurance mechanisms put in place to guarantee the high quality of deliverables:
   - Role of team leader / leading partner in quality assurance; **5 points**
   - Special additional measures for quality assurance proposed for this particular project; **5 points**

The sum of all quality award criteria gives a maximum possible total of 100 points.

Tenderers must provide a detailed technical offer addressing all points in the technical specifications and each of the quality award criteria. Repetition of mandatory requirements in the technical specifications without providing detail in the technical offer will only result in a very low score.

Offers must score at least 70% of criteria 1 & 2 and 50% of criteria 3, & 4, and at least 75 % of maximum possible total points against the quality award criteria.

Tenders that do not reach these minimum quality thresholds will be eliminated from subsequent stages of the evaluation process.

B) PRICE AWARD CRITERION

Tenders which passed the quality thresholds will be further assessed to ensure:

I. the price offer is made within the maximum budget for financial offers indicated in the tender specifications and;
II. the financial offer satisfies the formal requirements of the tender specifications.

C) THE BEST PRICE-QUALITY RATIO

Tenders for which financial offers were made within the maximum budget and satisfied the formal requirements indicated in the tender specification will be retained for the identification of the tender with the best price-quality ratio based on the following formula:

TOTAL SCORE OF THE EVALUATED OFFER (C) =

30 * Cheapest price offer/price of tender X

+

70 * Total quality score (out of 100) for all quality award criteria of tender X/100

PART 3 - HOW TO SUBMIT YOUR OFFER USING e-SUBMISSION

You must submit your tender electronically via the e-Submission application available from the e-Tendering website before the time limit for receipt of tenders.

The e-Submission application allows economic operators to respond to call for tenders by preparing their tenders electronically in a structured and secured way and submitting their tenders electronically. The e-Tendering is the starting point for launching the e-Submission application.

Make sure you submit your tender on time: you are advised to start completing your tender early. To avoid any complications with regard to late receipt/non-receipt of tenders within the deadline, please ensure that you submit your tender several hours before the deadline. A tender received after the deadline indicated in the procurement documents will be rejected.

Registration in the Participant Register

Any economic operator willing to submit a tender must be registered in the Participant Register - an online register of organisations and natural persons participating in European Commission's calls for tenders or proposals.

On registering each participant obtains a Participant Identification Code (PIC, 9 - digit number) which acts as its unique identifier in the Participant Register. A participant needs to register only once – the information provided can be further updated or re-used by the participant in other European Commission's calls for tenders or calls for proposals.

At any moment during the procurement procedure the Research Executive Agency Validation Services (hereafter *the EU Validation Services)* may contact the participant and ask for supporting documents on legal existence and status [and financial capacity].

The requests will be made through the register's messaging system to the e-mail address of the participant's contact person indicated in the register. It is the responsibility of the participant to provide a valid e-mail address and to check it regularly.

The documents that may be requested by *the EU Validation Services* are listed in the EU Grants and Tenders Rules on Legal Entity Validation, LEAR appointment and Financial Capacity assessment.

Please note that a request for supporting documents by the *EU Validation Services* in no way implies that the tenderer has been successful.

How to Submit your Tender in e-Submission

You can access the e-Submission application via the corresponding call for tender in TED e-Tendering, as specified in the Invitation Letter.

In order to have access to e-Submission, you will need to "Subscribe to call for tenders" on TED e-Tendering first. To subscribe, you will need to login with your an EU Login[50]. In case you don't have an EU Login, you can create an account at any moment. For more information see the EU login help. After logging in with your EU Login password, the e-Tendering will then display a button 'submit your tender' and you will be able to access the e-Submission.

The e-Submission "quick guide for economic operators" is available after logging in with your EU Login password.

Information to be filled in

In the e-Submission application, fill in and upload all necessary fields and documents as appropriate. All tenders must be clear, complete and consistent with all the requirements laid down in the tender specifications, including:

- **Signed declaration on Honour on Exclusion criteria.** All members of a joint tender, including subcontractors – if applicable – must upload the signed and dated declaration on honour on exclusion criteria using the template available here.
- **Signed declaration on Honour on Selection criteria.** In case of a joint offer from a group of economic operators, such declaration should be completed by the leading partner using the template available here.
- **Exclusion criteria**. If requested in the tender specifications, the tenderer and all members of a joint tender including subcontractors – if applicable – must provide the documentary evidence for exclusion criteria.
- **Selection criteria.** If requested in the tender specifications, the tenderer and all members of a joint tender including subcontractors – if applicable –, must provide the documentary evidence for selection criteria.
- **Technical tender.** It must address all the requirements laid down in the tender specifications.
- **Financial tender** The complete financial tender, including the breakdown of the price as provided in the tender specifications.

For detailed instructions on how to submit your tender, consult the Quick Reference Guide for Economic Operators where you will find:

- Technical requirements to use e-Submission
- Step-by-step guide to help you submit your tender
- Important advices and information on how to get technical support

***Please make sure all required documents and evidence are submitted with your tender*.**

Documents to be signed and dated while creating your Tender

[50] Previously called European Commission authentication system (ECAS)

The following documents must be signed and dated during the creation of your tender in e-Submission:

- **Declaration on honour(s).** All members of a joint tender, including subcontractors must sign and date the declaration on Exclusion criteria. Only the leader in a joint tender must sign and date the declaration on Selection criteria. The declaration on honour(s) must be converted to PDF format and then signed by the authorised representatives with advanced electronic signature based on qualified certificates or by hand.

Re-submission of a tender

After submitting a tender, but within the time limit for receipt of tenders, you may still submit a new version of your tender. **If you submit a new Tender you must include all your Tender documents, including the Qualification and Tender documents.**

You must formally notify EFSA that the previous tender is withdrawn. The notification letter must be signed by the legal representative who signed the original tender stating the call reference and the Tender ID you wish to withdraw. The notification must be uploaded in e-submission together with the new version of all tender documents. You are kindly requested to also e-mail the notification letter to EFSAProcurement@efsa.europa.eu.

Withdrawal of tenders

If after submitting a tender, you wish to completely withdraw your tender, you must formally notify EFSA that you wish to withdraw your submitted Tender(s) as indicated above.

Alternative tender

You are entitled to send several tenders to one call for tenders.

Deadline for receipt of tenders

The tender (including all documents) must be fully uploaded and received before the deadline for receipt of tenders indicated in the invitation to tender.

Please note that you are responsible to ensure that your full tender reaches the destination in due time.

In case of problems with the submission of the electronic tender, we recommend that you call the helpdesk in reasonable time before the time limit for receipt. The time it takes to submit the tender and upload all your documents may vary considerably depending on the number of concurrent submissions by other economic operators, the size of your tender and the type of internet service you are using. We recommend that you upload the documents the day before the deadline.

If the contracting authority detects technical faults in the functioning of the electronic equipment used for submitting and receiving tenders due to which it is impossible to electronically submit and receive tenders, you will be informed of the extension of the time limit by the contracting authority at the e-Tendering link.

For more information or technical support on e-Submission, please visit the e-Submission help site.

Contact

- Notifications for re-submission or withdrawal of tenders must be sent to: EFSAProcurement@efsa.europa.eu

  When communicating state the reference to the call for tenders and, if applicable, the Tender ID.

ANNEX 1 - FINANCIAL OFFER TEMPLATE

The template to be used for preparing your financial offer is available as an Excel file and is uploaded in e-Tendering with all other procurement documents.

ANNEX 2 - DRAFT CONTRACT

The contract which results from this procurement procedure will be based on the model annexed to these tender specifications.

ANNEX 3 – Model Declaration on Confidentiality

DECLARATION ON CONFIDENTIALITY

Subject: Contract ref. OC/EFSA/BIOCONTAM/2021/01 entitled 'Provision of support to EFSA and to ECDC in the production of the European Union Summary Report (EUSR) on Antimicrobial Resistance (AMR) in zoonotic and indicator bacteria from humans, animals and food and in the production of related AMR online interactive data visualisation dashboards and AMR story maps'

In the context of the execution of my tasks and the delivery of services under the joint EFSA & ECDC procurement Contract in subject, I hereby declare:

- To fully respect and comply with the provisions on confidentiality set out in the procurement Contract (Article I.15.4 and Article II.8) in carrying out my tasks and duties;

- To use any information received from EFSA or ECDC, regardless its format with discretion and solely for the purpose of executing my tasks and duties in the context of the procurement Contract;

- Not to divulge, publish or otherwise make available to any third parties, information considered confidential by EFSA or by ECDC and acquired in the context of the execution of tasks and the delivery of services under the procurement Contract;

- To ensure the safe storage of information considered confidential by EFSA or ECDC, applying state-of-the-art IT security measures and not to retain such information, data or documents for any longer than needed for the completion of my tasks and for the delivery of services under the procurement Contract;

- In case EFSA or ECDC provides me with personalized access credentials to its systems and tools, to store these securely and safely and under no circumstances to share these with any other person. I can use access credentials to EFSA or ECDC systems and tools solely for accessing and processing information, data or documents strictly necessary in the context of my tasks and duties assigned under the procurement Contract;

- As soon as no longer needed and in any case after the completion of my tasks and duties under the procurement Contract, to dispose in a secure manner of all related information, data and documents or to return these to EFSA and/or ECDC;

- To maintain the overall confidentiality and discretion in carrying out my tasks and duties under the procurement Contract. This obligation continues to exist after the completion of my assignment;

- To compensate EFSA and/or ECDC for damages arising from the breach of the above-mentioned statements.

For agreement,

First name and surname :	
Affiliation :	
Date and signature :	

Signed declarations are collected by the BIOCONTAM Unit of EFSA and by the One Health Related Diseases Section of ECDC, in charge of the procurement contract.

ANNEX 4 –Tables to be filled for the Selection criteria: Technical and Professional Capacity

Table 2.A - List of relevant projects

Subject area	Project	Start-end	Annex type
Campylobacter	Project name/title	2016-20xx	Project summary
Salmonella			
Indicator *E. coli*			
ESBL-, AmpC- and/or carbapenemase-producing *Salmonella,*			
ESBL-, AmpC- and/or carbapenemase-producing *Escherichia coli*			
Methicillin-resistant *Staphylococcus aureus*			
EU public health and food safety legislation			
Data management zoonoses data			
Data visualisation and epidemiological/statistical analysis zoonoses data			

Table 2.B - List of relevant data visualisation products

Name/Title	Type of Product	Start-end	Link	Annex type

Table 3- List of CVs

Profile	Zoonosis/subject area	Name	Years of experience	CV Number	Software tools	Subcontracted? Yes/No	Fulfilling of language requirement
b.1	Campylobacter						Certification/n years of work in international context
b.1	*Salmonella*						
b.1	*Indicator E. coli*						
b.1	ESBL-, AmpC- and/or carbapenemase-producing *Salmonella,*						
b.1	ESBL-, AmpC- and/or carbapenemase-producing *Escherichia coli*						
b.1	*Methicillin-resistant Staphylococcus aureus*						
b.2	Data management						
b.3	Statistics						
b.4	Veterinary public health						
b.4	Public health epidemiology						
b.5	One Health						
b.6	Team leader WP 1						

h.1	Web designer						
h.2	Web developer						
h.3	Digital Communication Strategist						
h.4	Team leader WP 2						
l.1	Project leader						