



**Specification  
for  
  
An Environmental Management Cloud  
Software Solution to provide Carbon  
Accounting, Future Emissions  
Forecasting, and Supporting Technical  
Services**



**Annex A – Services / Supplies and Services Specification**

**Annex B – Supplies Specification**

**Annex C - HM Government Environmental Reporting Framework (supplied under  
separate cover)**

**DRAFT**


**Annex A: Specification Document – Services / Supplies & Services**

<b>Title of Request:</b>	<b>Environmental Management Software Solution – Carbon Accounting, Forecasting, and Supporting Technical Services</b>
<b>Duration of Engagement:</b>	3 Years + 1 Year + 1 Year (2 x 12-month optional extensions)
<b>Required Commencement Date:</b>	1 <sup>st</sup> February 2024
<b>Proposed Contract Award Date:</b>	Anticipated Nov to Dec 2023

**1. Introduction**

UK Research and Innovation (UKRI) brings together seven Research Councils, Innovate UK, and Research England. Operating across the whole of the UK and internationally with a budget of £8 billion, UKRI is a non-departmental public body sponsored by the Department for Science, Innovation and Technology (DSIT).

Across UKRI we invest in the cutting-edge research and innovation essential to understanding and tackling the environmental sustainability challenges the world faces. By understanding our own impact on the environment and acting upon it, we will ensure the research and innovation endeavour plays its part in addressing these challenges.

The UKRI Environmental Sustainability Strategy<sup>1</sup> (published April 2020) sets out our own ambition to be a leader in environmental sustainability for the sector. It sets out what we will do to enhance and recognise where we are making a positive environmental contribution, while minimising environmental harm. By 2040 we aspire to be Net Zero operational carbon emissions\*. We have defined 'net-zero' broadly, looking beyond carbon emissions and ensuring our wider environmental contribution is a positive one.

The capability to confidently account for, monitor, and report UKRI carbon emissions through a reputable, verifiable method is a key component of UKRI's net zero approach. In 2018 the Natural Environment Research Council (NERC) completed successful procurement that secured a provider of the first environmental data platform used by UKRI.

This has been a critical component in enabling UKRI to establish our carbon baseline; record our in-scope data; understand the sources of our carbon impact; identify the interventions necessary to achieve our sustainability ambitions; and deliver our mandatory reporting commitments. These reporting commitments include quarterly to UK Government via UKRI's sponsoring Department DSIT under the Greening Government Commitments<sup>2</sup> (GGC), and UKRI's Annual Report and Accounts (ARA) following HM Treasury Sustainability Reporting Guidance<sup>3</sup>. With our current provider reaching the end of their contract period UKRI is taking the opportunity to reassess our future needs.

**UKRI now wishes to move beyond our current approach to carbon accounting and establish the capability to undertake forecasting of future carbon emissions and simulation of 'What If' carbon trajectory scenarios to 2040 to meet our net zero target as a result of planned UKRI interventions and investments. By doing this UKRI can harness our ability to continue to invest in world class science in a net zero way.**

\* Where the terms 'carbon emissions', 'carbon', or 'emissions' are used in this document; it is intended as an inclusive term to refer to the collective Greenhouse Gases (GHGs) known to have negative climate change impacts as covered by the Kyoto Protocol and GHG Protocol.

<sup>1</sup> [UKRI-050920-SustainabilityStrategy.pdf](#)

<sup>2</sup> [Greening Government Commitments 2021 to 2025 - GOV.UK \(www.gov.uk\)](#)

<sup>3</sup> [Public sector annual reports: sustainability reporting guidance 2022 to 2023 - GOV.UK \(www.gov.uk\)](#)



## **2. Aims & Objectives**

### **2.1 Purpose**

The purpose of this tender exercise is to secure a high calibre environmental software solution that will enable UKRI to:

- Undertake effective data management and reporting of our historical and current carbon emissions
- Undertake effective data management and reporting of wider environmental sustainability impacts as stipulated in the GGC reporting framework (as supplied under Annex C)
- Forecast and track UKRI's potential future carbon emissions to 2040 using estimated data generated by UKRI
- Undertake 'What If' scenario analysis of UKRI's future carbon emissions using estimated data generated by UKRI to assess a range of possible carbon reduction scenarios to 2040.

### **2.2 Aims**

UKRI intends to use the software & services provided to support a range of our strategic and operational environmental performance requirements, including:

- For carbon accounting and reporting based on data from our historical and current operations
- To generate future emissions forecasts using estimated data generated by UKRI from proposed future interventions into our existing operations and new infrastructure investments
- To generate 'What If' future scenarios and analysis through future scenarios using estimated data generated by UKRI from alternative options for delivering proposed future interventions into our existing operations and new infrastructure investments
- To use the range of emissions scenarios and forecasts generated by the platform as the evidence base to inform future net zero investment planning and decision-making
- To regularly review and report on emissions by Centre/Institute, Research Council, and UKRI (the 'Users')
- To conduct business analysis and future trend analysis by integrating our financial and carbon emissions data
- To enable continuous improvement in the quality of UKRI data sources (and compatibility from our contractors and service Suppliers) to drive increasingly robust emissions data
- To ensure UKRI's carbon reduction planning, accounting, and reporting is aligned with UK Government and global best practice, including the GHG Protocol and Science Based Targets initiative (SBTi) for example.

The solution provided by the Supplier **should** have suitable Application Programming Interface (API) architecture and be capable of automated data feeds with the Oracle Fusion<sup>4</sup> cloud software platform, the finance system used by UKRI. Suppliers are asked to set out how their product would do this.

Other relevant UKRI governance systems may also apply and require API capabilities (to be confirmed during tender process).

<sup>4</sup> [Oracle United Kingdom | Cloud Applications and Cloud Platform](#)



### 2.3 Objectives

The services supplied will provide UKRI with the capability to undertake carbon emissions management and reporting covering Scopes 1, 2 and 3 (business travel) through:

1. Carbon Accounting – historical and current data for reporting purposes
2. Carbon Forecasting - as a tool for assessing impacts of proposed decarbonisation plans for our existing estate, and impacts from proposed new infrastructure / investments on UKRI's future emissions trajectory towards Net Zero
3. Simulation of future carbon emissions scenarios and trajectories as a result of outputs produced as a result of activity 2– both by the supplier on behalf of UKRI, and for the Users to be able to sandbox various scenarios themselves within suitable system constraints
4. Business intelligence analysis through the creation of configured dashboard(s) and report(s)
5. Delivery of UKRI's mandatory environmental data reporting under GGC and ARA
6. Ongoing technical support and training to nominated UKRI staff (delivered by the Supplier)
7. Capability for future expansion of the software and services supplied within the contract period based on UKRI's strategic development needs and the capability of the Supplier, to include (but not limited to)
  - Data capture and reporting Scope 3 emissions (Supply Chain; Goods & Services; Research Funding)
  - Analysis of £cost / tCO<sub>2</sub>e
  - The introduction of carbon budgets and budget tracking
  - Embodied carbon emissions estimates.

### 2.4 Outputs & Expectations

UKRI expects the service provided to support Key Performance Indicators and Objectives of our Corporate Plan and Environmental Sustainability Strategy, to:

- Enable UKRI and our Research Councils to collect, record, validate, and consolidate the full range of environmental data within our determined environmental reporting scope (GGC reporting framework) from our operations in a clear and comprehensive manner that follows best practice in carbon and environmental accounting standards, verification, and data methodology.
- Enable UKRI and our Research Councils to clearly understand the environmental impact from our operations, for example waste generation by source and carbon impact of business travel.
- Provide a data platform and the analytical capabilities to enable UKRI and our Research Councils to use this evidence for the purposes of designing suitable strategic interventions to meet our range of commitments set out in the UKRI Environmental Sustainability Strategy, Council estate decarbonisation plans and UKRI's Infrastructure Investment programmes.
- Enable Research Councils and UKRI to validate Estate decarbonisation plans as part of future emissions forecasting
- Enable Research Councils and UKRI to screen and estimate the future operational carbon emissions from proposed infrastructure investments, to establish carbon emissions as one cornerstone of future investment decision-making alongside strategic fit and cost.



- Provide the capability for forecasting estimated future carbon emissions trajectories and forecasts based on data generated by UKRI and other relevant sources (such as Suppliers, contractors etc)
- Enable UKRI to bring together our financial and carbon data visualisation (budget, actual, forecasting) under one reporting approach
- Provide the data and performance management capabilities to enable UKRI to measure our progress robustly and consistently against our range of mandatory and organisational environmental and carbon reduction targets to 2040
- Provide the functionality and sophistication to present our performance through a range of clear, intuitive graphical and numerical relevant dashboards and tailored to the needs of a wide range of audiences both internal and external to UKRI and our Research Councils
- Enable UKRI to meet our mandatory reporting commitments under the Greening Government Commitments (GGC) on a quarterly and annual frequency
- Enable UKRI to meet our mandatory reporting commitments under the HM Treasury Sustainability Reporting Guidelines for Public Bodies on an annual frequency.

### 3. Background to the Requirement

#### 3.1 About UKRI

Launched in April 2018, UK Research and Innovation (UKRI)<sup>5</sup> is a non-departmental public body sponsored by the Department for Science, Innovation and Technology (DSIT). Our organisation brings together seven disciplinary Research Councils; Research England - which is responsible for supporting research and knowledge exchange at higher education institutions in England; and Innovate UK, the UK's innovation agency.

UKRI is the UK's largest public funder of research and innovation. **Our vision** is for an outstanding research and innovation system in the UK that gives everyone the opportunity to contribute and to benefit, enriching lives locally, nationally, and internationally. **Our mission** is to convene, catalyse and invest in close collaboration with others to build a thriving, inclusive research and innovation system that connects discovery to prosperity and public good.

The UKRI Corporate Plan<sup>6</sup> (2022-25) sets out the integrated capability of our research councils and provides an overview of their shared activities across UKRI to deliver our six strategic objectives:

- People and careers: making the UK the most attractive destination for talented people and teams from the UK and around the world
- Places: securing the UK's position as a globally leading research and innovation nation with outstanding institutions, infrastructures, sectors, and clusters across the breadth of the country
- Ideas: advancing the frontiers of human knowledge and innovation by enabling the UK to seize opportunities from emerging research trends, multidisciplinary approaches and new concepts and markets
- Innovation: delivering the government's vision for the UK as an innovation nation, through concerted action of Innovate UK and wider UKRI

<sup>5</sup> [UKRI – UK Research and Innovation](#)

<sup>6</sup> [UKRI corporate plan – UKRI \(msapproxy.net\)](#)



- Impacts: focusing the UK's world-class science and innovation to target global and national challenges, create and exploit tomorrow's technologies, and build the high-growth business sectors of the future
- Organisation: supported by a world-class organisation, making UKRI the most efficient, effective, and agile organisation it can be.

UKRI is firmly committed to Environmental Sustainability and the UK's commitment to be Net Zero by 2050<sup>7</sup>. The UKRI Environmental Sustainability Strategy<sup>8</sup> (2020) sets out our vision by 2040 to be:

- Net Zero from our owned operations, including measurable Scope 3 (from a 2017/18 baseline)
- Positive for the environment, and
- Setting the standard within our sector.

To deliver this vision UKRI has established a pan-UKRI Environmental Sustainability Programme (ESP) working collaboratively with our research councils that provides the required governance and programming assurance to UKRI's Executive Committee (ExCo) and Board. In 2022 the UKRI Board endorsed the ESP in setting out four measurable delivery Workstreams to 2025:

- Environmental Policy development and implementation
- Decarbonisation planning of our existing estate
- Developing a Concordat with the HEI Sector to agree shared environmental standards
- Environmental Data Management and embedding carbon reduction within UKRI Investment decisions.

The fourth of these Workstreams – Environmental Data Management – is critical for UKRI to continuously build our capability and the evidence base for our organisational performance and the required future investment action for UKRI to achieve net zero by 2040.

Since 2018 UKRI has operated an environmental data platform provided by a third-party service provider (Ecometrica Ltd) following successful procurement. This contract was placed for the purposes of improving our organisational environmental data collection, processing, and mandatory reporting under UKRI's GGC and ARA commitments. UKRI's environmental performance from our baseline year of 2017/18 to 2021/22 is set out in the Environmental Sustainability Report within the UKRI Annual Report and Accounts 2021/22<sup>9</sup>.

### **3.2 The UKRI Board and Executive Committee Requirement**

UKRI therefore has established capability for carbon accounting and performance reporting of our historical and current emissions within our organisational reporting boundaries, with the current contracted support of an environmental data platform provider. Building from this position, UKRI now requires the ability to assess and forecast how we might deliver our net zero by 2040 commitment.

The UKRI ExCo and Board have set a requirement to employ a suitable mechanism that can inform their environmental decision making and that can provide a strategic overview of UKRI's progress towards net zero. Specifically, to:

#### **Account for UKRI's existing emissions**

<sup>7</sup> [A legal duty to act - Climate Change Committee \(theccc.org.uk\)](https://theccc.org.uk)

<sup>8</sup> [UKRI environmental sustainability strategy – UKRI](#)

<sup>9</sup> [UKRI annual report and accounts 2021 to 2022 – UKRI](#)





- Capturing in-scope consumption data, undertake carbon conversion, and produce emissions reporting in line with current global best practice and UK standards.

#### **Forecast future UKRI emissions**

- Assess how UKRI will decarbonise and how we will track our progress / know if we are on track to 2040, displayed for example through glide-paths/reunion scenarios, the ability to mine the data as extracts, granularity of data overlays, emissions scopes etc.
- Have a reliable mechanism that will help them to know if / that the activities they agree to invest in in future (i.e., scientific infrastructure, facilities, research capabilities) will, or will not, be delivered in line with net zero emissions to maintain UKRI's required decarbonisation trajectory to 2040.

#### **Undertake trend analysis and 'What If' scenario analysis**

- Have an evidence base and a level of MI capability, bringing together data from all parts of the organisation, to review the options for and carbon impacts of proposed future investments.
- Use operational and estimated carbon data and data analytics as a management tool to steer UKRI towards net zero.
- Ensure UKRI's financial management data and carbon emissions data are integrated to provide consolidated Management information (financial cost and carbon cost).

To do this UKRI is seeking a solution capable of delivering these functions.

Whilst carbon accounting and performance reporting is required, **the priority focus of this service specification is the capability of Suppliers to deliver future carbon emissions forecasting and scenario comparison.**

### **3.3 UKRI operational activities relating to the procurement**

#### **Phase 1 (The scope of this procurement)**

UKRI is an organisation with global operations and our net zero commitment encompasses this framework specifically for Scopes 1, 2 and 3 (business travel only) of UKRI's owned operations. The services supplied will therefore be required to meet this framework.

UKRI and Research Council operational activities that will be covered by the Supplier services within this procurement contract are:

- Existing estate in the UK (including powered field sites)
- Existing estate internationally
- Existing mobile scientific platforms (Ships, Aircraft)
- Staff business travel (UK and international)
- Proposed new Infrastructure investment.

Embodied carbon emissions are outside of scope of the services required in this phase.

#### **UKRI considers it essential that through the services supplied under this contract:**

- **the supplier has the ability to provide an approach that integrates UKRI's resource consumption / carbon emissions data with Oracle Fusion (our finance operating system) to provide management information and visual alignment / presentation of financial and carbon data.**





- **the handling of relevant data sources (for example Utilities, travel management providers, Building Management Software etc) that drives production of our carbon data should be automated wherever possible to reduce manual handling, enhance operating efficiency and ensure accuracy.**

These key criteria will require the Supplier services (i.e., the software platform) to have full Application Programming Interface (API) capabilities.

Suppliers will also be required to demonstrate as part of their submissions their current capability to meet UKRI's anticipated future need, as set out in Phase 2 as follows.

### **Phase 2 (outside the scope of this procurement)**

The next phase of UKRI's planned work (likely timescale 2024-25 onwards) will aim to begin establishing evidence on our broader carbon emissions, and the mechanisms to further support UKRI's understanding of our carbon impact to inform emissions reduction strategies. This will include, but not limited to:

- Data capture and reporting of UKRI and Research Council's Scope 3 emissions (Supply Chain; Goods & Services; Research Funding)
- Analysis of £cost / tCO<sub>2</sub>e
- The introduction of carbon budgets and budget setting (Budget / Forecast / Actual)
- Data capture and reporting of embodied carbon emissions
- Data capture and reporting of whole life cycle carbon emissions
- The capture of other relevant environmental impacts, where able.

The Supplier will therefore also be required to demonstrate their capability to deliver these functions.

### **3.4 Key Requirements**

UKRI's headline requirements for the services to be supplied under this procurement are for a solution that:

- Is a cloud based solution
- Is an 'off the shelf' environmental data solution but which can be configured to client needs
- Meets international and UK best practice standards for carbon emissions reporting and emissions forecasting (at minimum GHG Protocol, SBTi, and UK Government)
- Can provide standard carbon accounting, carbon conversion, and reporting functions
- Can provide carbon emissions forecasting functions
- Can provide carbon emissions future scenario and trend analysis functions
- Can provide visual presentation and reporting of data through a variety of visual means (for example dashboards, graphs, charts etc) for accounting, forecasting, and future scenario functions
- Has full Application Programming Interface (API) and relevant capabilities for alignment with Oracle Fusion
- Can provide functionality for automated data collection and upload / transfer from UKRI platforms (i.e., Oracle Fusion) and those of our service providers (i.e., Utilities, Waste, Water, Travel Providers etc.)



- Ensures the transfer of all existing data from the current to the new supplier.

Further full details are provided in Section 4 (Requirements).

### **3.5 How the selected Supplier solution will be used**

UKRI and Research Councils will use the solution provided by the Supplier to:

- Record all in-scope environmental data in a single, dedicated environmental reporting platform
- Report historic and current carbon and wider environmental performance in respect of UKRI's organisational and mandatory reporting commitments
- Generate future carbon emissions forecasts against our Net Zero target derived from estimated carbon data generated by UKRI from assessment of proposed future investments in our existing estate and new Infrastructure projects
- Generate future 'What If' carbon emission scenarios against our Net Zero target derived from carbon data generated by UKRI from assessment of a range of options and timings to deliver proposed future investments in our existing estate and new Infrastructure projects
- Generate a range of intelligent, intuitive, and user-friendly reporting dashboards, graphs, charts, and information through the supplied solution for the purposes of management information, strategic planning, engagement and communications on our environmental performance, progress and glide paths
- Integrate this solution for carbon management with our financial management system and processes to enable coherent decision making on the financial and carbon costs of our investments
- Establish the evidence base and analysis capabilities to inform our future strategic and investment planning aligned to the delivery of UKRI's net zero by 2040 commitment.

### **3.6 Roles & Responsibilities**

#### **UKRI & Research Councils**

Section 4.3 sets out the contract and performance management arrangements between UKRI and the Supplier, with the key responsibilities as follows:

- UKRI Procurement and Contracting Process: UKSBS
- Contract and Financial Management: UKRI Digital & Data Services (DDaT)
- Contract Performance Management: UKRI Finance Team
- Technical Support to UKRI Finance (and with the Supplier): UKRI Environmental Sustainability Programme Team.

Specific business functions within UKRI and Research Councils will have substantial involvement in the successful operation and utilisation of the services to be provided by the Supplier. These include, but are not limited to:

- Environmental Sustainability and Carbon Leads
- Energy Managers
- Environmental Managers
- Estates Management teams
- Facilities Management teams
- Finance teams
- Commercial & Procurement teams (for Business Travel via third-party travel service providers)
- Strategy Managers



- Programme and Project Managers.

Given the sensitive nature of some information, the solution will be required to have the capability for different access levels from whole platform to different restriction levels.

### **Data Sources - Current Service Providers & Contractors to UKRI**

For **carbon accounting** requirements, UKRI and Research Councils have a range of external service providers and contracts which are the sources of relevant management information on our in-scope consumption data for environmental reporting. This includes service providers for, but not limited to:

- Electricity and Gas
- Oil
- Water
- Waste management
- F-Gas (service and maintenance of equipment)
- Business Travel – hire cars
- Business Travel – public and private transport, trains, aircraft.

UKRI and Research Councils also have some processes and systems in place that capture in-scope consumption data internally or via operating arrangements including, but not limited to:

- Building Energy Management Systems
- Metering, sub-metering and billing where UKRI and / or Research Councils occupy office and laboratory space which is rented from a partner or third-party organisation
- On site heat and power generation from renewable energy or other localised sources

The frequency of this consumption data from service suppliers and within UKRI is available predominantly on a monthly and quarterly basis, although in limited cases this is more infrequent. This will be confirmed and communicated during the onboarding phase.

Under this contract the Supplier will be required to engage with these service providers and establish appropriate processes for the purposes of automating all relevant data capture and uploading into the Suppliers platform with due consideration for local data assurance / validation. UKRI will work with our service providers to support the Supplier in this task.

For the generation of **carbon forecasting** and future **'What If' scenario** requirements, UKRI is establishing a series of processes that will generate estimated carbon emissions from planned UKRI and Research Council investments in:

- Decarbonisation initiatives for our existing estates
- Proposed investments in new Infrastructure
- Targeted investment in capital estate improvements through a dedicated, time limited UKRI 'Net Zero' Fund

The estimated carbon emissions data generated through these processes will be provided to the Supplier as the basis for creating future carbon forecasts and creating future 'What If' scenarios.

### **Supplier selected under this Procurement Contract**

The selected Supplier will be required to deliver the services and requirements as set out in this specification within the proposed contract management framework.

The service provider will be expected to regularly liaise with between 8-12 UKRI and Research Council staff from the key business functions outlined as part of data accuracy and quality assurance. This may be via email correspondence, telephone and video conferencing (i.e. Zoom, Microsoft Teams) as suitable. It is



expected that the Supplier will build effective working relationships with relevant Research Council and UKRI responsible leads for this activity from the start of the contract.

## **4. Scope**

### **4.1 Operating Scope**

The full description of the requirements to be delivered by the Supplier under this contract are set out in Section 5.

The organisational scope of the services to be provided under this contract is all UK and international operations for:

- UKRI corporate operations
- Seven Research Councils (AHRC; BBSRC; ESRC; EPSRC; MRC; NERC; STFC)
- Innovate UK (IUK)
- Research England (RE).

The operational scope of the services to be provided under this contract is the environmental reporting scope:

1. As set out in Annex C i) Greening Government Commitments (GGC) reporting template – for historical and current carbon accounting and reporting
2. For future proposed UKRI and Research Council infrastructure investment (decarbonisation of existing estate; investment in new infrastructure) – for carbon forecasting and 'What If' scenario generation

The services will enable UKRI to meet our organisational and mandatory environmental commitments. For clarification, the reporting scope of HM Government's Greening Government Commitments is UK operations only, whereas the reporting scope of UKRI's Net Zero commitment is our UK and international operations.

The database must have the capability for conversion of consumption data into Greenhouse Gas (GHG) emissions and carbon dioxide equivalent (CO<sub>2</sub>e) using standardised UK emissions conversions factors (to be agreed by the client). The capability for UKRI to report by GHG scopes 1, 2, and 3 (including sub-categories), as per the GHG Protocol corporate reporting standards at different reporting layers (from emission type i.e., electricity; to site level; Research Council level; and whole UKRI level for example) is required. The database must be capable of both location and market-based electricity emissions reporting.

### **4.2 Potential for the range of services to expand or reduce as need changes**

It is expected that the range of services set out under this contract will not be subject to significant change over the period of the contract. There will be the requirement to account for periodic changes and alterations in organisational and operational scopes as a result of UKRI and external factors.

The UK Governments emerging strategies and prioritisation on Net Zero delivery may result in changes to the next reporting phase of GGC (2025-30). There may therefore be the requirement to alter the operational reporting scope set out under this specification that cannot yet be reliably considered.

The ability to add additional data reporting categories to the database over the contract period is required to reflect expected expansion of UKRI reporting requirements and capabilities.



Adaptation of the organisation structure established on the platform may be required based on changes within Research Council and UKRI's organisational scope, for example through the addition of new or divestment of old buildings.

UKRI has already identified the future expansion requirements for our environmental and carbon management (as set out in Section 4.4) which are out of scope of this contract. They will however form the basis of future service expansion requirements and indicate the necessary capabilities UKRI is seeking in potential Suppliers.

### **4.3 Exclusions**

#### **Phase 2 (outside the scope of this procurement)**

The next phase of UKRI's planned work (likely timescale 2024-25 onwards) will begin establishing evidence on our broader carbon emissions, and the mechanisms to further support UKRI's understanding of our carbon impact to inform our emissions reduction strategies. This will include, but not limited to:

- Data capture and reporting of UKRI and Research Council's Scope 3 emissions (Supply Chain; Goods & Services; Research Funding)
- Analysis of £cost / tCO<sub>2</sub>e
- The introduction of carbon budgets and budget setting (Budget / Forecast / Actual)
- Data capture and reporting of embodied carbon emissions
- Data capture and reporting of whole life cycle carbon emissions
- The capture of other relevant environmental impacts, where able.

These functions are outside of scope of this contract.

However, UKRI wishes to establish the capability for delivering these functions in the next phase of our development in carbon management planning.

Suppliers are therefore required in their submission to illustrate their capability to deliver these functions.

### **4.4 Known Constraints**

- Mandatory quarterly reporting deadlines under the Greening Government Commitments
- Quality and format of some data from service suppliers
- Quality and accuracy of some UKRI data
- Multiple sources of consumption data and multiple formats of data provision
- UKRI data security and data protection requirements.

### **4.5 The Period of the Agreement**

The period of this agreement is as follows:

- Maximum 5-year operating period: 3-year fixed contract + 1 year + 1 year optional extensions by Client
- This agreement will commence from February 2024 and will be in place up to February 2029 at the latest, with a break at year 3 (Feb 2027) and optional annual extensions for two further years up to 2029.

This agreement will be in place up to but not after February 2029.



## 5. Requirement

### 5.1 Introduction

UKRI requires the provision of a secure, off-the-shelf, configurable, environmental data management solution with accompanying technical support. It is expected that these services will enable UKRI and its constituent Research Councils to record, validate, consolidate, forecast, and report our carbon and wider environmental impacts within our organisational reporting boundary in a clear and comprehensive manner that follows best practice in environmental accounting standards.

The services to be delivered under this contract will provide the carbon management data platform and subsequent evidence base from which UKRI can deliver key elements of our Environmental Sustainability Strategy and plan our approach to meet our commitment to be net zero by 2040.

UKRI is seeking a solution that can:

#### 1. Account for UKRI's existing emissions

- Capturing in-scope consumption data, undertake carbon conversion, and produce emissions reporting in line with current global best practice and UK standards and carbon conversion factors.

#### 2. Forecast future UKRI emissions

- Produce visual and data information to enable UKRI to understand the future potential emissions from our operations and investments to assess how we will decarbonise and how we will track our progress / know if we are on track to 2040.
- Have a reliable mechanism that will help us to know if / that the activities we agree to invest in in future (i.e., scientific infrastructure, facilities, research capabilities) will, or will not, be delivered in line with net zero emissions to maintain UKRI's required decarbonisation trajectory to 2040.

#### 3. Undertake trend analysis and 'What If' scenario analysis

- Have an evidence base and a level of MI capability, bringing together data from all parts of the organisation, to review the options for and carbon impacts of proposed future investments
- Use operational and estimated carbon data and data analytics as a management tool to steer UKRI towards net zero
- Ensure UKRI's financial management data and carbon emissions data are integrated to provide consolidated Management information (financial cost and carbon cost).

#### 4. Have the capability for future service expansion to meet UKRI's future needs

- 'Future proofing' UKRI's work to ensure as our capabilities mature (as summarised in Section 3.2 'Phase 2'), the procured solution can deliver.

### 5.2 Requirements

In the delivery of the four activities set out in Section 4.1, the services to be supplied under this procurement must meet the following requirements:

#### 5.2.1 Product Quality Assurance





- Is 'off the shelf' but which can be configured to client needs
- Meets and maintains international and UK best practice standards for carbon emissions accounting, reporting, and emissions forecasting (at minimum GHG Protocol, SBTi, and UK Government)
- Delivers clear and effective standards on Quality Assurance regarding ensuring the most up to date digital and software requirements are maintained; maintaining up-to-date environmental practices, standards, and source datasets; best practice in data capture, conversion, and reporting quality; data consolidation and gap analysis; data error identification & analysis; and data reporting compliance.

### 5.2.2 Product Capability

- Has a simple and intuitive user interface, with easy data upload and information export
- Can be configured to reflect UKRI's organisational structure and meet different user needs and circumstances (for example individual Research Councils; UKRI; Investment programmes and projects, etc)
- Has architecture that can cascade / 'consolidate or expand' data sources – for example, from building level to site level; to estate level; to Institute level; to Research Council level; to whole-UKRI level
- Can capture and upload UKRI operations data from multiple sources and locations
- Can capture and upload estimated data produced by UKRI for forecasting future emissions
- Is flexible to allow emissions forecasting to be built from the 'ground up': project by project; by Research Council; and by whole-UKRI
- Can capture and upload financial forecasts for new projects alongside future emissions forecasting
- Can convert in-scope UKRI consumption data into relevant environmental and carbon emissions using required conversion factors (i.e., Defra conversion factors, UK Government electricity grid decarbonisation projections)
- Can produce a range of Business Intelligence visual reporting functions (i.e., dashboards; charts; graphs; tables; future scenario comparisons – 'what if'; future reduction trajectories etc) for historical and current emissions (actual data) and future emissions forecasting (estimated data)
- Functionality to sandbox 'what if' scenarios without affecting the 'locked in' glide path of UKRI as a whole
- Can provide effective benchmarking between UKRI, Research Councils, and specific sites and allow for benchmarking against other organisations
- Has mapping functionality for geo-reference to display the UKRI 'footprint' from macro (whole-UKRI) to micro (site location) levels
- Can produce the relevant data in formats specified by UKRI to fulfil the requirements of the Greening Government Commitments (GGC) quarterly reporting and UKRI Annual Report and Accounts (HM Treasury Sustainability Reporting for Public Bodies).

### 5.2.3 Product Digital Technical Capability

The supplier is to explain how they will meet the following requirements:





- Has full Application Programming Interface (API) capabilities to ensure integrations with existing UKRI operating systems, specifically Finance (Oracle) and relevant others (tbc)
- Ability for automating input / upload of data provided from UKRI, Research Council, and external supplier sources (i.e., Utilities, Water, Waste, Corporate Travel Providers etc.) or alternative solutions. Desirable to negate the need for client manual input and multiple data handling, reduce duplication via different versions of spreadsheets and trackers created by Councils – ‘one version of the truth’.
- Needs to be at least WCAG 2.1 AA compliant
- Ability to migrate compatible data from another solution
- Ability to import the full data set from a csv or similar suitable format from another solution
- Ability to export the full data set into a format for migration into another solution.

#### 5.2.4 Supplier Capability

- The provision of technical support services for platform development, user support, and issues related to the technical operation of the platform by UKRI and Research Councils
- The provision of essential support services for quantitative and qualitative manipulation of the platform; data management; report generation; data analysis; and trend analysis
- The provision of training on the platform for nominated UKRI and Research Council users. Please refer to Annex B, Section 4 below for specific details of the requirement
- The Supplier can demonstrate their environmental credentials to meet the requirements as set out in Annex B, Section 2
- Is capable of future service expansion (as set out in Section 3.2 ‘Phase 2’) specifically regarding Scope 3 emissions data capture and reporting
- Can demonstrate clients of similar size and complexity to UKRI (UK and / or internationally) as case studies of capability and performance quality
- Can demonstrate ability to validate inputs to software using transparent benchmarks and protocols.

### 5.3 Contract Operation

#### 5.3.1 Contract Management

The procurement process for the services set out in this specification is being managed by UK Shared Business Services (UKSBS), a specialist shared services provider owned by the former-Department for Business Energy and Industrial Strategy (BEIS) – now the Department for Science, Innovation and Technology (DSIT) - and UKRI. UKSBS provides HR and Payroll, Finance, Procurement, IT business services and specialist advice. A designated UKSBS Procurement Manager will lead the tender process on behalf of UKRI.

The contract will be managed by UKRI’s Digital Data and Technology (DDaT) division via a dedicated DDaT contract manager. Contract management, invoicing, and payment will be managed through DDaT with the Supplier.

The technical operation and performance of the contract – ensuring the ongoing service and operational delivery requirements are achieved - will be undertaken by UKRI’s Environmental Sustainability Programme (ESP) Team. The critical integration between the environmental reporting services delivered by the Supplier under this contract and UKRI’s financial management system (Oracle Fusion) is a critical



component and Key Performance Indicator in the delivery of this contract and will be supported by UKRI Finance Team. The relationship between the Supplier and UKRI's ESP Team will therefore be fundamental to effective performance. UKRI's ESP Team will approve Supplier payment to UKRI DDaT based on the Supplier's performance each quarter against an agreed delivery programme. The ESP Team will liaise with the Supplier directly on matters of technical and operational requirements within the scope of UKRI's Environmental Sustainability governance.

The Supplier will determine within their tender response the level of resource required to deliver the full scope of services and contract management. An example of how this may be organised, as a minimum, would include:

- A contract / business manager to be responsible for the technical and financial aspects of contract agreement, delivery, and change management (i.e., Supplier performance; invoicing and payment; changes in Supplier staffing; operational continuity, etc.)
- A senior data / technical / lead analyst responsible for the operational delivery and performance management of the services supplied
- One or more allocated technical staff to support the senior analyst to ensure suitable capacity and continuity for periods of high work volume, technical necessity, or absence.

### 5.3.2 Contract Performance Management

In the first year of contract operation monthly review meetings between the Suppliers delivery lead and UKRI's nominated lead will be required to ensure the required levels of performance, operation, support, and delivery are consistently managed in line with contract Key Performance Indicators and payment schedules. This is also intended to build operational relationships.

To ensure effective contract performance and management against UKRI GGC reporting commitments, from year 1 onwards a quarterly performance meeting will take place within three weeks following each GGC submission to DSIT (August, November, February, May) with the purpose to:

- Review each quarters' data reporting and supporting services provided, to enable payment approval
- Review progress against an agreed annual delivery programme
- Forward look to prepare for future delivery, including identification of issues, challenges, and opportunities for improvement.

There is an expectation that some flexibility and responsiveness between the Client and Supplier will be in effect as need arises within the delivery of the services. UKRI anticipates that there may, at times, be a requirement for services during the duration of the contract period as a result of factors both internal and external to UKRI. These requirements are most likely to be in response to emerging needs, for example further enhancing platform functionality based on evolving UKRI and Research Council's business needs; or further enhancing reporting formats in response to UKRI and / or HM Government requirements such as changes to GGC reporting metrics.

Where significant new requirements in addition to, or considered outside the scope of, the requirements set out in this specification, arise they will be dealt with under separate, time-bound commissions outside of the scope of this contract. Suppliers are expected to indicate their willingness and capability to meet this requirement. Suppliers are also expected to provide with their submissions a list of day rates for staffing grades assigned to the scope of the requirements set out in this specification. A Proactive and open approach is required to ensure continual improvement of the database and effective support services during the delivery period.



### 5.3.3 Supplier Onboarding

In providing the services the Supplier will ensure the correct set up of their platform and execution of technical onboarding services within the procurement plan timescales (as set out by UKSBS) and further as and where required. This is to ensure correct UKRI reporting scope and categorisation is established within the required reporting structures and UKRI operational functions. This will include loading any historic and current data in an agreed format (Excel, ODF, CSV, PDF, HTML) onto the database for the purposes of the services to be provided under this contract. Data will be provided by the client or the current service Supplier, if applicable. Data loading is to be completed and validated by the Supplier, and approved by the client, in advance of the contract start ('go live') date of 1<sup>st</sup> February 2024.

### 5.3.4 Supplier Technical Provision

The Suppliers' solution will be a fully hosted cloud based service which will meet UK Government data security, resilience (including database backups) and disaster recovery requirements. Access for use by the client will be via a TLS 1.3 compliant secure web access. Data Storage will be within the European Economic Area. The database provider must own the software and therefore able to offer updates at no extra cost, resellers will not be considered for this procurement. The Supplier is required to set out their environmental performance regarding their carbon emissions from their operation including use of servers and data storage.

The Suppliers solution must be compatible with a range of web browsers including Microsoft Edge, Google Chrome, Firefox, and Internet Explorer (9-11). The database interface with users is to be user friendly and easily accessible for common PC and laptop software programmes and including on mobile computing devices (e.g., iPhone and iPad).

The Supplier will ensure provision of platform hosting and licence fee for the full contract period.

The Supplier will provide automated reporting to UKRI for the completion of quarterly GGC and annual UKRI Annual Report and Accounts reporting, mirroring the formats required for each. Additional automated reporting requirements will be agreed between the Supplier and client on commencement of the contract.

The Supplier will ensure the provision of Quality Assurance services to meet the requirements and standards of UKRI and UK Government (DSIT and HM Treasury or any subsequent departments) mandatory and organisational environmental reporting (as per Annex C). This is expected to be both automated (for example through in-built tolerances / minimum completion percentages) and manual (for example through physical data checks and random data sampling). Any additional appropriate QA methods the Supplier can offer within the core contract are welcomed and should be set out within the Suppliers response.

Up to 100 individual secure logins (usernames and passwords) will be provided to the Suppliers service with adjustable levels of authorisation for data modification summarised below, with actual terminology and process to be confirmed by the Supplier:

- **Administrator** – full access to modify current and historic data sets and to modify/add reporting parameters. Able to provide management reports and create new bespoke reports.
- **Data Input** – restricted access to database, able to modify and upload data for specific areas/sites. Able to provide management reports and create new bespoke reports within their area.
- **View only** – No access to modify data but able to view data and run management reports.

Change Control mechanisms and processes are to be in place by the Supplier agreed with UKRI to ensure effective recording of changes made to the database during the contracting period, including requirements for justification and approval. Examples may include, but are not limited to, periodic changes to UK applied



carbon conversion factors; UK grid decarbonisation factors; and changes to Research Council and / or UKRI estate (new acquisitions and divestments) altering UKRI's reporting scope.

The Supplier will be required to have flexibility to respond to regular adhoc data requests, providing targeted data reports, and support & guidance to UKRI's contract performance manager and nominated representatives (UKRI Finance, DDaT, Research Council's) on an ongoing basis as required by UKRI business needs for the duration of the contract.

Technical and essential support provided by the Supplier will be in working hours: 0900 – 1700 hours, 5 days a week (Monday to Friday).

Appropriate provision of the service by the Supplier and portal access by the client must be available continuously without exception, unless for agreed periods of known database maintenance, upgrade, or security provisions with notification to be provided at least 2 weeks in advance.

The minimum availability is expected to be 99% of each year unless agreed in advance due to scheduled maintenance of the platform by the Supplier. If scheduled maintenance falls within 7 working days of UKRI's key reporting commitments under GGC or Annual Reporting, the Supplier shall ensure adequate provision to enable UKRI to fulfil our reporting obligations as a minimum under GGC and annual sustainability reporting within our Annual Report.

#### **5.4 Key Performance Indicators**

Key Performance Indicators (KPIs) are to be agreed between Client and Supplier at contract initiation stage and will be drawn from these areas:

- Continue to hold API and data integration with Oracle Fusion and other relevant UKRI service providers (data sources)
- Production of UKRI GGC quarterly report and annual return (data)
- Production of UKRI Environmental Performance report (data and visuals) for UKRI Annual Report and Accounts
- Production of UKRI Net Zero progress reporting (data and visuals)
- Effective data capture and visual representation for historical emissions accounting
- Effective data capture and visual representation for future emissions forecasting
- Effective future data capture and visual representation for future 'What If' emissions scenario analysis
- Undertaking effective UKRI and Research Council staff training to establish confidence and capability in the full use of the supplied services
- Delivery of suitable and timely levels of technical support provision
- Achievement with the hurdle rates for supplier system performance including number of system failures and outages; data and QA errors
- Supplier services meets and maintain international and UK best practice standards for carbon emissions accounting, reporting, and future emissions forecasting.

#### **5.5 End of Contract**



At the end of contract the client may consider contract extensions. Off boarding in the event of discontinuation of service is to be satisfactorily undertaken within a maximum of three months prior to contract end to include:

- A single place to download all data added to platform in csv format and all uploaded documents and reports are to be made available in a single location (HTML, ODF, PDF)
- A structured user off-boarding process including transfer of client data in appropriate standard formats and provision of standard historical usage reports
- Off-boarding will be to either UKRI or a nominated provider acting on UKRI's behalf
- All confidential information will be returned or destroyed and confirmation of destruction of such confidential data (as applicable) will be made in writing.

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## 6. Timetable

The procurement timetable set out by UKSBS for Supplier selection (anticipated June to November 2023) includes three important aspects which must be completed as part of the process:

- **Supplier Engagement and Demo:** an expectation that suppliers will demonstrate their solutions to a range of UKRI staff as part of Supplier engagement days
- **Sandbox session:** an expectation that the shortlisted/winning Supplier will make available their system for UKRI to fully explore and test the system to ensure it meets requirements / fit for purpose – for a period up to 6 weeks – ahead of contract confirmation (Anticipated around October - November 2023)
- **A mobilisation and onboarding period** of 3 months between the current and new Supplier (November 2023 – January 2024) if required.

The key milestones to be achieved annually for the duration of the contract, alongside the services and KPIs as described to be provided by the Supplier under this contract will be fundamental to their successful achievement, are as follows:

- **Provision of UKRI GGC Quarterly Reporting:** In-scope data collection, consolidation, error analysis, reporting and Quality Assurance, production of data in format (Quarterly fixed submission deadline dates in August, November, February, and April each year)
- **Provision of Environmental Performance section of UKRI Annual Report & Accounts (ARA) and GGC Annual Return:** In-scope data collection, consolidation, error analysis, reporting and Quality Assurance, production of data in format (March to May inclusive each year)
- **UKRI Net Zero Progress Reporting** – In-scope data collation at UKRI level and Research Council sub-level. Actual performance overlayed against agreed carbon trajectories and targets, in graphical and numerical forms (Quarterly per annual cycle aligned with GGC data: August, November, February and May each year)
- **Monthly MI and data performance review** with UKRI Finance including any technical support required
- **Attendance at quarterly performance review** with UKRI Finance as part of invoicing and payment contract management process.

The Programme of activity will be agreed between the Client and Supplier prior to award of contract. Performance management will be conducted via quarterly review meetings (as per Section 4.3 above).

Completion dates for mandatory UKRI reporting under GGC and Annual Report commitments are fundamental to the success of our environmental data management and reporting and are non-negotiable. These reporting frameworks and deadlines are fixed by HM Government to which UKRI is bound under our sponsoring Government Department for Science Innovation and Technology (DSIT).




**Annex B: Specification Document – Supplies**
**1. Quality Assurance Requirements**

Suppliers should be able to demonstrate how they meet or exceed the following appropriate quality assurance standards:

- Supplier has, or is working to establish, an Environmental Sustainability Strategy and a credible Net Zero target in accordance with UK and international standards, such as the Greenhouse Gas Protocol (GHG Protocol) and any other recognised standards, such as the Science Based Targets initiative (SBTi) for example
- Supplier has a relevant environmental sustainability policy (or policies) in place
- Supplier can clearly demonstrate the environmental credentials and carbon management of its products and operations within the context of the operation of its digital and computing operations including energy consumption, energy sourcing, data centres / server performance, carbon accounting and mitigation measures. Suppliers should set out clearly how and where their product / services align with current UK and international environmental standards (For example, 2021 Best Practice Guidelines for the EU Code of Conduct on Data Centre Energy Efficiency).
- Supplier can clearly set out the data sources and emission conversion factors used in their product align with the market and policy contexts that the client operates in (UK Government, Defra)
- Supplier can clearly set out how they maintain their product / services in alignment with latest environmental and carbon accounting best practice, science, and quality standards.
- Supplier can demonstrate robust internal Quality Assurance processes for data handling and client services to ensure appropriate levels of precision in data handling and report generation for clients.

**2. Whole Life Support**

The Supplier will be required to ensure:

- Technical and essential support is provided by the Supplier will be in working hours: 0900 – 1700 hours, 5 days a week (Monday to Friday) via Zoom / Microsoft Teams, phone, and / or email.
- Appropriate provision of the service by the Supplier and portal access to the client must be available continuously without exception, unless for agreed periods of known database maintenance, upgrade, or security provisions with notification to be provided at least 2 weeks in advance.
- Deliver the minimum availability is expected to be 99% of each year unless agreed in advance due to scheduled maintenance of the platform by the Supplier. If scheduled maintenance falls within 7 working days of UKRI's key reporting commitments under GGC or Annual Reporting, the Supplier shall ensure adequate provision to enable UKRI to fulfil our reporting obligations as a minimum under GGC and annual sustainability reporting within our Annual Report.
- Have flexibility within the contract pricing schedule and resource allocation to respond to regular adhoc data requests, providing targeted data reports, and support & guidance to UKRI's contract performance manager and nominated representatives (for example UKRI Finance, DDaT,





Research Council's and Institutes) on an ongoing basis as required by UKRI business needs for the duration of the contract.

### 3. Training

UKRI will require the provider to deliver a programme of structured and flexible training for the duration of the contract. This is to ensure designated Research Council and UKRI staff (to be confirmed upon successful appointment) can confidently and effectively use the system supplied.

A series of training modules will be required from the service provider for a defined number of UKRI users to cover the successful operation and manipulation of the system to deliver the required outcomes for UKRI's carbon accounting, reporting, forecasting and scenario analysis requirements:

- i) **Initial onboarding**; for a select number of key operators across UKRI – during Supplier onboarding period prior to contract start.
- ii) **Full onboarding**; for all staff nominated as users of the system – within the first 3 months of contract start.
- iii) **Operational refresher**; Up to 2 sessions per each year of the contract for nominated staff as required, and for onboarding of new staff.
- iv) **Advanced User**; At least 1 session per each year of the contract, specifically for staff with responsibility for operating and owning the input and output from the system (for example UKRI Finance Team; Research Council Environmental Leads).

The scheduling of these sessions will be required to be responsive and flexible to meet the operational needs of UKRI and Research Councils as staff roll on and off across our operational areas. It is anticipated that at least one refresher training session will be required in the second half of Year 1, and at least 2 refresher sessions in the each of the following Years. The timing of the advanced user session is expected to be flexible depending on need and availability.

As the contract progresses further bespoke training may be required from time to time depending on UKRI operational need and/or changes to carbon accounting practice or changes to the service providers platform. This will be agreed separately outside of this contract as an additional service.

It is anticipated that UKRI will designate different grades of user of the system which will require training to be tailored by the service provider accordingly. The categorisation and organisation of this will be through agreement with the Supplier based on their system capabilities and recommended approach. An example of how this may be organised based on UKRI operations is:

- **Advanced User**: Staff with core responsibility for system operation and ownership of environmental data (for example UKRI Finance Team; UKRI Environmental Programme Leads; Research Council Environmental Leads).  
  
Expected functions include: full system operation and interrogation; data & evidence entry; data extraction & analysis; dashboard creation and manipulation; trend analysis; in-depth platform functionality and manipulation; generating reporting and scenario analysis outputs at various levels from micro (site) to macro (whole-UKRI); identifying technical / operational improvement requirements.
- **Specific User**: Staff with core responsibility for data and evidence collation (existing operations) and for data generation (estimated for forecasting) and for general performance analysis and reporting (for example Research Council Data Leads; Facilities Managers; Project & Programme Managers; Senior Managers).



Expected functions include: Data & supporting evidence entry; data analysis at Council, estate, and site levels; dashboard manipulation and trend analysis; generating reports at Council level.

- **General User:** Staff with a requirement to support the operation of the platform and/or use the platform as an evidence base for developing policy, business cases for investment, and targeted Management Information purposes (for example Policy & Strategy Managers; Project Managers; Facilities Managers).

Expected functions include: Data & supporting evidence entry and extraction; data analysis at Council, site, and project levels; general dashboard creation and manipulation; generating reports at site or Council level.

- **Technical User:** Technical staff from UKRI DDaT and IT Services, as well as relevant Research Council digital experts, who will support the operation and development of the service for the Client as required.

Training sessions for optional years 4 and 5 of the contract should be allowed for in the provision of services but not defined at this stage. It is expected that training requirements will be refined over the course of the contract duration and some flexibility in the content and focus of the training will be required as users increase their maturity and knowledge over time.

Due to UKRI's environmental commitments and the geographical location of key UKRI users that will engage with the services provided, the training will be required to be delivered online via an accessible platform such as Zoom or MS Teams. Training is to be recorded and electronic / hard copies of all training materials provided to users. Where possible, some training may be delivered in person at nominated UKRI and Research Council sites where there is clear benefit to learners.

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**Annex C HM Government Environmental Reporting Framework  
Guidance****Supplied under separate cover for context:**

- i) *Greening Government Commitments (GGC) Arm's Length Body (ALB)  
Environmental Reporting Template*

Setting out the scope of UKRI environmental data capture and reporting framework

POs GGC Reporting Template 2022-23 – ALBs (Excel)

**Supplied via hyperlink to UK Government Website:**

- ii) *UK Government Policy Paper: GGC 2021-2025*

<https://www.gov.uk/government/publications/greening-government-commitments-2021-to-2025/greening-government-commitments-2021-to-2025>

- iii) *Public Sector Annual Reports: Sustainability Reporting Guidance 2022-23 (HM Treasury)*

<https://www.gov.uk/government/collections/public-sector-annual-reports-sustainability-reporting-guidance>