



## Consultancy Opportunity Data Engineer

<b>Application deadline</b>	2 <sup>nd</sup> December 2024
<b>Starting date</b>	As soon as possible
<b>Location:</b>	Hybrid: 2 days-office (Nijmegen, The Netherlands), 3 days-home
<b>Time estimate:</b>	6 months
<b>Language requirements:</b>	English

### Background and Context

Rewilding Europe (RE) is committed to showcasing the benefits of rewilding across diverse European landscapes. To achieve this, we monitor our actions, outputs and outcomes using technical and impact monitoring tools that align with our 2030 Strategy. In recent years, RE has developed a technical monitoring framework and an ecological impact monitoring framework as part of our Strategy 2030. We are now working to expand this impact framework to include monitoring broader rewilding benefits, such as a sense of connection to nature and pride, as well as economic impacts. Once completed, this comprehensive "triple bottom line" impact framework will allow us to clearly demonstrate the effects of rewilding, support adaptive management on the ground, and aid in strategic decision-making across various levels of the organization. A good framework relies on a holistic vision the management, analysis, and use of monitoring data. To this end, RE has developed a concise strategic approach to monitoring and research.

We are seeking a skilled professional to bring our monitoring data vision to life. This role will also contribute on how to best integrate the monitoring data needs into Rewilding Europe's overall data architecture, ensuring that the requirements of our monitoring frameworks are fully aligned with our broader organizational data strategy.

### Objectives

Rewilding Europe is looking for a Data Engineer with proven data management expertise to:

- Establish key data management components, including designing data architecture, creating infrastructure for comprehensive data collection, and streamlining data integration processes.
- Establish the foundational monitoring data management elements, such as data models and data governance. As such, building the data platform from the ground up will require efforts beyond standard technical engineering tasks.
- Create key visualizations to showcase results across the three dimensions of rewilding—ecological, social, and economic—leveraging existing data sets where possible.

### Scope of Work

The key tasks for this assignment are:

- **Data Architecture Development:** Design and implement a robust database infrastructure to support the collection and storage of diverse types of ecological, social and economic data across multiple rewilding landscapes.
- **Data Integration & ETL/ELT Processes:** Develop processes to streamline the integration of data into the database, ensuring efficient and accurate data capture.
- **Data Management:** Establish data management protocols and workflows, including data governance to maintain data integrity, accessibility, and security. Design / create the Monitoring component of RE Enterprise Data Model.
- **Reporting and Visualization:** Create dashboards, reports, or other visualization tools that allow Rewilding Europe to effectively analyse and interpret the data.
- **Documentation:** Provide documentation on the above steps.

## Deliverables

The following deliverables ensure that the data infrastructure and tools developed during the assignment are fully operational, well-documented, and effectively support the monitoring and of Rewilding Europe's impact.

### Database Architecture Development

Design and Implementation of a complete data platform: Develop and implement a scalable, secure, and efficient database system tailored to the specific needs of Rewilding Europe's technical and impact monitoring frameworks. This includes:

- **Database Schema Design:** Creation of a comprehensive database schema that accommodates diverse types of ecological and socio-economic data (e.g., species observations from camera traps, vegetation surveys, social surveys on attitudes and non-economic benefits, spatial data on land managed or influenced by RE – both raw data and results from analyses).
- **Database Setup:** Advise RE on the most suitable database management system (e.g., Microsoft Access, PostgreSQL) for its purpose, given our needs for user-friendliness and preference for open-source software. Set up the database in the agreed upon system.

### Data Integration and Processes.

Advice RE on the best suitable data integration and ETL/ELT processes and implement the selected solution(s). In detail:

- **Data Processes Development:** Develop the ETL/ELT processes to automate the preparation, integration, and transformation of raw data from various sources into the database.
- **Data Integration Protocols:** Establish application programming interface for seamless data integration from field data collection tools, remote sensing sources, and other relevant datasets. That is, create the capability in RE systems to combine, harmonize and synchronize monitoring data.

### Data Management

- **Data Management Protocols:** Create and document data management procedures, including data entry, validation, cleaning, and update processes, to ensure data accuracy and consistency.

### Reporting and Visualization

- **Dashboard Development:** Design and develop interactive dashboards that provide insights into key indicators and metrics, supporting adaptive management and decision-making. These dashboards should update automatically as new data is fed into the database.

- **Custom Reports:** Generate customized reports that highlight trends, progress, and outcomes, suitable for both internal stakeholders and external partners. Analyses or data processing used to create the reports should be documented with scripts.

### **Documentation**

- **Comprehensive Documentation:** Provide detailed documentation of the database infrastructure, data integration processes, ETL/ELT pipelines, and reporting tools. This includes user manuals and scripts.

### **Required Skills and Expertise**

To be successful in this role, the candidate should possess the following skills and experience:

- Master's degree in data sciences, computer sciences, or a related field. Environmental sciences background is a plus.
- Experience: At least 3-5 years of experience in data analysis, data engineering, or a related role, preferably with a focus on environmental or ecological data and open-source systems.
- Data Engineering: Experience in designing, creating and preferably managing data platforms, preferably within an environmental or ecological context.
- Data Management: Demonstratable experience in setting up a professional Data Management Practice at an organisation is preferred.
- Data Integration and ETL: Proficiency in Extract, Transform, Load (ETL) processes to streamline data collection and integration.
- Data Analysis and Reporting: Strong skills in data analysis, including the ability to create dashboards, reports, and visualizations using tools like ArcGIS Dashboards, Power BI, or other similar in Microsoft environment
- Programming Skills: Proficiency in programming languages such as Python, R, SQL or PostgreSQL for data manipulation and analysis.
- Experience with GIS Tools: Familiarity with Geographic Information Systems (GIS) and spatial data management is a plus.
- Collaboration and Communication: Ability to work collaboratively with multidisciplinary teams and communicate complex data concepts clearly to non-technical stakeholders.

### **Timeline**

This assignment will run for 6 months, starting as soon as possible.

### **Supervision and Team**

The consultant will report to Raquel Filgueiras, Lead of Impact Monitoring and Research and will work closely with the rest of her team as well as with the Lead of IT at Rewilding Europe.

### **How to Apply**

Applications should be submitted via email to [hr@rewildingeuropa.com](mailto:hr@rewildingeuropa.com) with “**Data Engineer**” in the subject line by **December 2nd, 5:00 PM CET**. Please include a **cover letter** explaining your motivations for applying and demonstrating how your past experiences align with the position.

Shortlisted candidates will be notified by December 9th, with first round of interviews taking place between December 10th and 13th, 2024.