

BIRDLIFE INTERNATIONAL - JOB SPECIFICATION/DESCRIPTION

JOB TITLE:	Data Engineering Lead
DIVISION/DEPARTMENT:	Operations/ IT

1. OVERALL PURPOSE OF JOB

<p>To take overall responsibility for the Data engineering team working to industry recognised best practices.</p> <p>To maintain and develop BirdLife International's data platform and perform core roles in data compliance, optimization, ingestion and data transformation within the IT group.</p> <p>To be accountable for data service availability and systematic integrity.</p> <p>To manage the support and future development of the organizations ERP solution liaising with strategic business partners.</p> <p>To line manage and supervise the data engineering team and to perform data development operations. To be the final technical escalation point, ensuring a motivated and delivering team.</p> <p>Ensuring excellent standards and service levels, for seamless support to the BirdLife Secretariat.</p> <p>Working with the business and other technical teams to understand complex and wide-ranging business and technical requirements and to specify, design and select technology solutions that meet those requirements. Proposes resourcing options for development and ongoing support to business/conservation systems.</p> <p>Managing positive relationships with IT staff, IT support companies and organisations providing IT solutions as well as managing federated budgets associated with these relationships.</p> <p>Responsible for ensuring development projects are delivered on time and on-budget.</p> <p>Ensures that all business systems are compliant with BirdLife's IT and Security Standards, as well as relevant legislation.</p> <p>To define data government and operational procedures and implementation of policy.</p> <p>Ensuring excellent standards and service levels, for seamless support to the BirdLife secretariat.</p> <p>To be very accommodating and flexible in approach.</p> <p>To identify and deliver service enhancements through a continuous research and development process ensuring that the organisation's data services are scalable and adhering to best practices at all times.</p> <p>Engaging with end users, communicating the work of the technical team(s) and providing user training to eliminate barriers in the uptake of IT solutions.</p>

2. WORK RELATIONSHIPS

REPORTING TO (LINE MANAGER):
Director of IT
REPORTING TO JOB HOLDER (LINE MANAGED STAFF):
ERP System Administrator Business Intelligence Developer Occasional supervisor of outside contractors

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PRINCIPAL OTHER WORKING RELATIONSHIPS/RESPONSIBILITIES WITHIN SECRETARIAT:
Supporting and advising All BirdLife secretariat staff. All visiting staff and external visitors. Interaction with third party service and support providers.

3. KEY WORKING RELATIONSHIPS GRID

Contact	Level (1-3)	Contact	Level (1-3)	Contact	Level (1-3)
BirdLife network / other NGOs	2	General public	1	Policy makers (institutional /politicians/ corporations)	1
BirdLife advisory groups, committees, reg. councils	2	Press & media	1	Funding organisations (institutions, foundations, corporations)	2
BirdLife Global Council	1	Regulators/ legislators/ auditors	2	Individual donors/ members	1
Suppliers/service providers	3	Scientific community	2	VIPs/ royalty/ high worth individuals	1

Level of Contact

1.= General Informing. "Appearance, first impressions". May have some independent outside exposure and contact, primarily informative.

2.= Presenting/Representing/Reporting "Relationship management". Independent exposure representing BirdLife. Maintaining individual contacts. Usually managing information flow.

3.= Justifying/Negotiating - "Influencing decision makers". Independent exposure as lead contact, representing Birdlife to highly influential people. Responsible for complex and sensitive/high risk communications.

4. MAIN DUTIES/WORK PROGRAMME RESPONSIBILITIES

By main work area:
<p><u>People and resources</u></p> <ul style="list-style-type: none"> • Line management duties including recruitment, training, and work planning and performance management, in line with the IT framework. • Develop and maintain positive relationships with external IT / data companies ensuring service levels are suitable for organisational and staff needs. • Line Manager for the data engineering team within the IT department. • Escalated point of contact for all data technical queries and troubleshooting for the key products supported. • Delegated budget management for the development and maintenance of business/conservation systems. • Staff training, development and mentoring. <p><u>Systems and Products</u></p> <ul style="list-style-type: none"> • To support, manage and maintain the data fabric and underlying systems within the Azure environment. • To support, maintain, develop and coordinate project work on the Unit 4 ERP solution. • Management of all data fabric and services within the secretariat. • To research and develop best practices for BirdLife IT in relation to data, advising and working alongside stakeholders to provide a highly available, continuous service. Closely aligned with IT support, Web, Web Development and working with the Science and conservation teams.

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- Creation and oversight of Standard Operating Procedures.
- Implement system upgrades, ensuring continued service availability and that changes are carried out in a controlled and tested manner.
- To develop materials and provide internal IT training resources to Secretariat staff.
- To give additional support to the outsourced support company as and when required to deal with outstanding external tickets and resolving complex queries. Taking ownership and responsibility for liaising with multiple external functions when required to get a resolution.
- Taking project lead on data driven projects. Full product life cycle: Stakeholder scoping to system deployment.
- Creation, implementation and maintenance of novel innovations to meet the Secretariat's data IT needs; in tight budgetary and capacity restrictions.
- Database lifecycle support (provisioning / deletion / patching and upgrading).
- Build and maintain ETL/ELT processes to ingest data from various sources
- Monitor and troubleshoot data pipeline issues to ensure data availability and accuracy.
- Develop scripts and automation using PowerShell, Python, or other relevant languages.
- Design, implement, and manage databases and data models using Azure SQL Database, MySQL Database, PostgreSQL, PostGIS, and other Azure database services.
- Optimise database performance and ensure data integrity and security.
- Migrate existing disparate databases to the Azure Cloud.
- Document data processes, system designs, and architecture to ensure maintainability and scalability.
- Ensure appropriate User Access management.
- Creation of data compliance policies and their enforcement.
- Ensure timely and accurate Back-up and Recovery
- Monitoring and Alerting on Database services.
- Change and Incident Management
- Design and develop robust, scalable, and efficient data architectures using Azure data services.
- Ensure through continuous maintenance and improvements that the data architecture meets the needs for data ingestion, storage, processing, and analysis.
- Tuning and Optimisation
- To perform reasonable tasks as requested by the IT Director, COO and BirdLife International

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5. LIMITS OF AUTHORITY/RESPONSIBILITY FOR RESOURCES

RESPONSIBILITY AREA	LEVEL OF AUTHORITY
Financial/Budgetary	Delegated responsibility to purchase IT services, directed by the Director of IT.
Contracts – Funders	NA
Contracts – Staff/Consultants	NA
Contracts – Service providers	Delegated responsibility to purchase IT services within parameters set and directed by the Director of IT.
Legal Responsibility	NA
Other	NA

6. EDUCATION/SKILLS AND OTHER SPECIAL REQUIREMENTS

REQUIREMENTS	KNOWLEDGE/SKILLS/ATTRIBUTES
Minimum General Education	A good general standard of education
Job Specific Education/Qualification	Bachelor’s degree from an accredited university in Computer Science, Engineering, or related field; or equivalent industry experience. Dev Ops practitioner with extensive experience and exposure to Scrum and / or Agile working practices.
Job Specific Knowledge	<ul style="list-style-type: none"> • Comprehensive experience of IaaS services – Azure, AWS. • Expertise with database development and CI/CD pipelines. • Experience of Azure Synapse and Azure Data factory. • Experience with principles of continuous integration and deployment. <ul style="list-style-type: none"> ○ Experience of creating artifacts and artifact repositories. ○ Experience of containers and container orchestration services. ○ Comprehensive experience of MS Azure. ○ Experience of using version control (Git, Github) • Comprehensive experience of databases. MySQL, TSQL, PostGIS, PostgreSQL. • Comprehensive experience in SQL. • Extensive experience in scripting languages: PowerShell, bash, R and Python • Experience of data compliance tooling and policies, with a preference for Azure Purview. • Comprehensive experience of data design principles and database technologies, including traditional data warehousing and big data frameworks. • Experience of Power BI. • Experience in agile ways of working and the associated tools. • Excellent organizational and prioritization skill. • Excellent communication skills, technical concepts, and processes to cross audience. • Proven ability to manage multiple technical projects. • Proven ability to motivate and guide a small busy team. • Proven ability to problem solve in logical and analytical way. • Final escalation point for the data engineering team. • SharePoint or other collaboration solution experience. • Proven ability for conflict resolution. • Proven ability to motivate and guide a small busy team. • Linux server experience, Tomcat, Cron jobs, Bash, Apache

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	<ul style="list-style-type: none"> • Experience of networking technologies. Understanding of IP v4 LAN, DHCP services DNS, VLANs etc. •
Experience	<p>Proven experience of working in a busy technical department and supporting users remotely. Ideally experience of supporting a multi-site environment. International experience would be a benefit, but not essential.</p>
Management & organisational skills	<ul style="list-style-type: none"> • A systematic approach to problem solving. • Ability to organise own workload and prioritise accordingly • Ability to work in a team environment and user focused. • Good attention to detail, testing and documentation. • Ability to organise own workload and prioritise accordingly. • Experience of staff leadership inclusive of motivating, setting objectives and evaluating performance. • Experience of managing relationships with 3rd party support companies. • Ability and motivation to deliver high quality work consistently. • Experience of procurement, budgeting and financial monitoring.
Communications skills	<ul style="list-style-type: none"> • Excellent interpersonal and oral communication skills with the ability to present, negotiate, consult, influence and build credibility with internal colleagues at all levels and external system providers and suppliers. • Excellent written skills with the ability to produce technical reports and business cases for a senior, non-technical audience. • Ability to communicate IT concepts and ideas to a non-technical audience, including with people whose first language is not English. • Approachable and positive.
Analytical Skills	<ul style="list-style-type: none"> • Ability to analyse support issues and create novel and flexible solutions.
Creativity & Initiative	<ul style="list-style-type: none"> • Ability to produce working solutions to complex issues within over arcing guidance and strategy. • Experience of keeping up to date with knowledge and industry best practices.
Computer Literacy	Covered by job specific knowledge.
Languages	The ability to speak other languages would be an advantage.
Travel requirements	NA
OTHER DESIRED/HELPFUL KNOWLEDGE/SKILLS/ATTRIBUTES	
A highly motivated, focused and ambitious individual to ensure our users receive exemplary service at all times, with the ability to understand people's problems and manage staff requests in a professional and efficient manner. A friendly approach to resolving technical issues.	

Prepared by:	Date:
Mat Kilby, Director of IT	July 2024