

## Overview

This standard defines the competencies required for developing and implementing scalable and flexible Business Intelligence (BI) reporting solutions that can adapt to evolving business needs and data environments. It includes designing, implementing, and maintaining BI solutions that provide actionable insights to support data-driven decision-making across an organisation.

BI professionals are responsible for gathering stakeholder requirements, integrating data from diverse sources, and designing dynamic reporting solutions that cater to a variety of business needs. This standard also includes sustainable reporting practices, such as reducing redundancy in reports, optimising data visualisation methods, and ensuring that BI solutions remain relevant and efficient over time.

By ensuring BI reporting solutions are scalable, adaptable, and strategically aligned with business objectives, professionals in this field can enhance organisational agility, improve data accessibility, and maximise the value derived from BI investments.

This standard is intended for professionals involved in the development, implementation, and continuous improvement of BI reporting solutions as part of their role.

## Performance criteria

### *You must be able to:*

1. Define and document Business Intelligence (BI) reporting requirements by engaging with stakeholders to maintain alignment with organisational requirements.
2. Translate user requirements into scalable and efficient BI solution designs, integrating data sources while maintaining compatibility with enterprise systems.
3. Collaborate with operational teams to seamlessly integrate BI solutions into existing enterprise infrastructure, maintaining data integrity, governance, and interoperability.
4. Develop and implement BI reports, dashboards, and data visualisation solutions that provide actionable insights and support data-driven decision-making.
5. Validate and optimise data quality by identifying and resolving inconsistencies, applying governance frameworks, and maintaining reporting accuracy.
6. Conduct rigorous testing of BI reports, dashboards, and data models to confirm alignment with stakeholder needs and organisational standards.
7. Deploy, monitor, and continuously optimise BI reporting solutions, proactively addressing performance issues and maintaining system reliability.
8. Provide tailored training and ongoing support for both technical and non-technical users to maximise adoption and usability.

## Knowledge and understanding

### *You need to know and understand:*

1. Principles and techniques of data analysis, transformation, and management, including Extract, Transform, Load (ETL) processes and automation for BI reporting.
2. Methods for gathering, documenting, and translating BI reporting requirements into scalable technical specifications.
3. Best practices in data visualisation, including selecting appropriate chart types, layouts, and colour schemes for different stakeholders and decision-making contexts.
4. Industry-standard BI tools and platforms and cloud-based BI environments.
5. Data integrity principles and governance frameworks, including data validation, anomaly detection, automated error-checking, and quality assurance methods.
6. Techniques for handling and resolving data quality issues, including automated data cleansing, reconciliation, and lineage tracking.
7. Principles of cross-functional collaboration, including working with IT, data and operations teams to implement seamless integration of BI solutions into enterprise systems.
8. Strategies for automating BI reporting workflows, including automated alerting mechanisms based on reporting thresholds and real-time anomaly detection.
9. How to effectively communicate technical BI concepts to non-technical audiences, tailoring explanations based on stakeholder needs.
10. Troubleshooting methodologies for BI solutions, including root cause analysis, performance diagnostics, and version control for BI reports and dashboards.
11. Legal and regulatory requirements for data protection and privacy, including GDPR, the Data Protection Act, and industry-specific compliance frameworks.
12. Equality, diversity, and human rights considerations in BI reporting, ensuring inclusive data practices, equitable access, and mitigation of algorithmic bias.
13. Security and confidentiality best practices for BI solutions, including role-based access control (RBAC), encryption methods, and secure API (Application Programming Interface) integration.
14. Testing frameworks and methodologies for BI solutions, including functional, performance, and user acceptance testing (UAT) to validate reporting accuracy and system reliability.
15. Techniques for validating data accuracy, consistency, and reliability across

multiple datasets.

16. Automated testing methodologies for BI reports and dashboards, including continuous integration/continuous deployment (CI/CD) pipelines, regression testing, and test-driven development (TDD) for BI scripts.

17. Deployment best practices for BI solutions, including scaling cloud-based BI solutions, optimising for performance, and ensuring seamless enterprise integration.

18. Effective training methodologies for BI tool adoption, including self-service BI enablement, interactive learning platforms, and contextual help systems.

19. Design principles for technical content, to maintain BI training materials and user guides that are clear, engaging, and accessible.

20. BI solution monitoring and performance optimisation techniques, including real-time performance tracking, automated diagnostics, and predictive analytics for proactive issue resolution.

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Develop and Implement BI Reporting Solutions

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