

BUSINESS INTELLIGENCE ANALYSTS

A DEEP DIVE FOR SKILLS-BASED HIRING

REV: 04/04/16



Occupation Overview: Business Intelligence Analysts

Foundational Competencies

- **Critical Thinking:** Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions, or approaches to problems.
- **Active Listening:** Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
- **Active Learning:** Understanding the implications of new information for both current and future problem solving and decision making.
- **Writing:** Communicating effectively in writing as appropriate for the needs of the audience.
- **Systems Analysis:** Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.
- **Complex Problem Solving:** Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.
- **Systems Evaluation:** Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.
- **Coordination:** Adjusting actions in relation to others' actions.
- **Mathematics:** Using mathematics to solve problems.
- **Monitoring:** Monitoring/assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.

Occupation-Specific Competencies

- **Intermediate Microsoft Office:** Demonstrated ability to install, configure, and maintain a wide variety of end-user software packages (which must include a business productivity suite, such as MS Office or Google Docs); demonstrated intermediate-level skills in the use of a wide variety of end-user software packages.
- **Intermediate General Data Techniques:** Demonstrated ability to collect, analyze, manipulate, and manage data; moderate proficiency in converting data between a variety of formats.
- **Intermediate Business Process and Analysis:** Demonstrated ability to analyze and process complex data for core business operations; demonstrated ability to analyze systems, create business requirements documentation, and perform decision-support and life-cycle analysis.
- **Basic General Database:** Demonstrated proficiency with SQL basics (e.g., selecting, inserting, updating, deleting records), at least one database management software application, and database fundamentals such as normalization, schemas, and relationships.
- **Basic Business Intelligence:** Basic familiarity compiling large amounts of data from business operations and early ability to reach meaningful insights on the best relevant business decision.
- **Basic Data Storage:** Demonstrated ability to develop, integrate, implement, and maintain data storage solutions in support of Business Intelligence solutions; familiar with data modeling and data warehousing concepts.
- **Intermediate Systems Design and Implementation:** Demonstrated ability to assist customers in the gathering of requirements and design, implement, and support moderately complex technology solutions to existing business problems.
- **Basic General Accounting:** Familiarity with monitoring and reconciling expenses, revenues, assets, and liabilities; basic proficiency with analyzing and preparing common financial documents and reports (e.g., tax returns, income statements, balance sheets).
- **Basic Tech Support:** Familiarity with the use of some components of commonly-used computer hardware, software, applications, etc. and a basic ability to diagnose customer problems and provide troubleshooting and issue resolution support.
- **Basic Testing:** Demonstrated ability to design tests, create test scripts, ensure that test cases mimic user usage, execute and validate unit tests, and use appropriate test tools for their own changes. Familiarity with system and performance testing.

Job Description (Example)

Produce financial and market intelligence by querying data repositories and generating periodic reports. Devise methods for identifying data patterns and trends in available information sources.

- Lead the customer through: Requirements, Design, Development, System Test, User Acceptance Test and Operations.
- Define and document business requirements in Requirements Analysis Document.
- Organize and facilitate joint application design meetings with user groups, department heads, and project stakeholders to define business requirements.
- Facilitate source to target data mapping exercises for data sources.
- Document "as is" business process models and define "to be" business process models.
- Facilitate data quality program to evaluate, report, and remediate data quality issues.
- Develop test plans to verify system meets business requirements and aid user community in test planning and execution.

Activities (Example List)

- Analyze competitive market strategies through analysis of related product, market, or share trends.
- Synthesize current business intelligence or trend data to support recommendations for action.
- Communicate with customers, competitors, suppliers, professional organizations, or others to stay abreast of industry or business trends.
- Manage timely flow of business intelligence information to users.
- Identify and analyze industry or geographic trends with business strategy implications.
- Collect business intelligence data from available industry reports, public information, field reports, or purchased sources.
- Analyze technology trends to identify markets for future product development or to improve sales of existing products.
- Generate standard or custom reports summarizing business, financial, or economic data for review by executives, managers, clients, and other stakeholders.

Prioritized Foundational Competencies: Business Intelligence Analysts

Most Common Required Competencies	
1	Critical Thinking: Analyzing data to identify patterns and evaluate for validity; meeting customer needs given the constraints; able to act as a bridge between the technical team and the business – ideally, able to help balance business needs with key constraints (budget, data, time); ideally, offering ideas proactively and coming up with new solutions given customer needs.
2	Active Listening: Giving attention, understanding key points, and asking questions as appropriate; able to comprehend, not just listen (understand, not transcribe); able to rephrase and explain what others have said; understanding the relevant context (business situation, customer context); builds relationships and connects; identifies what's important and not; seeks out new and unexpected information.
3	Writing: Communicating effectively in writing as appropriate for the needs of the audience; consider your audience (technical versus functional) and write accordingly; tailor writing to use case (e.g., status update versus a business case and proposed solution); concise, focused, and readable.

Most Common Break Point Competencies	
1	Critical Thinking: <i>See previous.</i>
2	Active Listening: <i>See previous.</i>
3	Active Learning: Understanding the implications of new information for both current and future problem-solving and decision-making; able to learn and use new tools and processes and operate within diverse cultures; proactively seeking out training and growth opportunities; recognizing one's weaknesses and trying to improve them; ideally, seeks a mentorship opportunity.

Most Preferred Competencies	
1	Active Listening: <i>See previous.</i>
2	Complex Problem Solving: Understanding complex problems, gathering related information, and proposing options; establish perspective for major participants; create and help evaluate options; act as a bridge between technical, functional, and business groups and help build consensus on an option; understand the implications of different choices for the business; challenge one's own thinking.
3	Active Learning: <i>See previous.</i>

Most Hard-to-Find Competencies	
1	Active Learning: <i>See previous.</i>
2	Complex Problem Solving: <i>See previous.</i>
3	Coordination: Build consensus and rapport with stakeholders; share important information with others; follow through on commitments made to stakeholders; ideally, coordinate activities with all stakeholders, articulate next steps and assign responsibility; ideally, able to drive progress, manage to milestones, and identify and resolve roadblocks.

Most Evolving Competencies	
1	Active Learning: Evolving due to big data, internet of things, big data, data visualization and predictive analytical tools; companies can now create more “build your own solutions” expanding the set of possible options; able to do more things with more tools; all the changes make interest in and aptitude for learning new information, tools and processes increasingly critical.
2	Systems Analysis: Evolution driven by cybersecurity, big data, more technical tools and XaaS options (i.e., IaaS, PaaS, SaaS); changes increase value of delivering user access controls and being mindful of security; ideally, able to think through how different solutions affect infrastructure needs and how current choices constrain or open up future changes to the system.
3	Complex Problem Solving: Driven by bigger data sets and harder questions; expanded set of tools deliver more capabilities (e.g., data visualization) and efficiency (e.g., R); changes make it more important to consider various issues (power usage, cost, environmental impact) when making decisions; compliance and security increasingly important; need to be able to deliver more solutions that can scale.

Prioritized Occupation-Specific Competencies: Business Intelligence Analysts

Most Common Required Competencies	
1	Intermediate Business Process and Analysis: Demonstrated ability to analyze and process complex data for core business operations; demonstrated ability to analyze systems, create business requirements documentation, and perform decision-support and life-cycle analysis.
2	Basic Business Intelligence: Basic familiarity compiling large amounts of data from business operations and early ability to reach meaningful insights on the best relevant business decision; conduct secondary research on key issues as needed and incorporate into decision-making process; create reports and work flows given insights and data.
3	Basic General Database: Proficiency with Excel (e.g., charts, reports, data analysis); able to understand and apply basic logic; SQL basics (e.g., selecting, inserting, updating, deleting records) nice but not need to have; basic familiarity with at least one database management software application and database fundamentals such as normalization, schemas, and relationships.

Most Common Break Point Competencies	
1	Basic General Database: <i>See previous.</i>
2	Intermediate Business Process and Analysis: <i>See previous.</i>
3	Basic Testing: Demonstrated ability to design tests, create test scripts, and ensure that test cases mimic user usage; high-level familiarity with system and performance testing; test and validate the accuracy of data; able to identify and eliminate low-value reports (“keep a clean reporting environment”).

Most Preferred Competencies	
1	Intermediate Business Process and Analysis: <i>See previous.</i>
2	Basic Business Intelligence: <i>See previous.</i>
3	Basic General Database: <i>See previous.</i>

Most Hard-to-Find Competencies	
1	Basic Business Intelligence: <i>See previous.</i>
2	Intermediate Business Process and Analysis: <i>See previous.</i>
3	Basic Testing: <i>See previous.</i>

Most Evolving Competencies	
1	Basic Business Intelligence: Evolution driven by cybersecurity, big data, more technical tools, XaaS options (i.e., IaaS, PaaS, SaaS) and data visualization; changes make ability to analyze large, diverse data sets to reach meaningful insights more valuable; able to create more dynamic, user-friendly reports, tools, and process flows given all the new capabilities and data.
2	Intermediate Systems Design and Implementation: Evolution driven by emergence of more problems, data, diverse uses cases, and cybersecurity needs; puts a higher value on being able to gather and assess requirements, developing solutions with the current technology available, and advising the business and tech teams on the best solution given the business needs and technical capabilities.
3	Basic General Database: Evolution driven by big data, more technical tools, data visualization and more unstructured data (e.g., twitter, sentiment analysis); changes put a premium on being able to compile data from various sources (including databases) – leveraging the most valuable sources – to advise on technology solutions to business problems.

Occupation Deep Dive: Business Intelligence Analysts

Job Titles Within This Occupation

- Data Analyst
- Business Systems Analyst
- Business Intelligence Analyst
- Business Process Analyst
- Business Intelligence Developer
- Analyst
- Business Intelligence Architect
- Account Manager
- Business Data Analyst
- Business Analyst Senior
- Data Scientist

- Business Analyst
- Business/Competitive Intelligence Analyst
- Big Data Wrangler
- Project Manager
- Systems Engineer
- Enterprise Architect
- Business Requirements Analyst
- Agile Analyst

Certification and Education Preferences (Example)

- Business Analyst Professional
- All of the Enterprise based BI tools offer certification, i.e., Cognos, MiroStrategy, Business Objects, Tableau, etc.
- Business Analysis Body of Knowledge (BABOK)
- The Open Group Architecture Framework (TOGAF)

Tools Used (Example List)

- SQL
- Oracle
- SAP
- Business Objects
- SQL Server
- SAS
- Tableau
- Visio
- PeopleSoft
- Excel
- Hadoop
- Visualization Tools
- Any software application that the client uses as part of their business process.
- CRMs
- Marketing Analytic Software
- PM Software

Other Relevant Foundational Competencies

1	Reading Comprehension
2	Speaking
3	Judgment and Decision Making
4	Time Management
5	Social Perceptiveness
6	Persuasion
7	Learning Strategies
8	Instructing
9	Negotiation
10	Service Orientation
11	Management of Personnel Resources
12	Programming
13	Management of Financial Resources
14	Operations Analysis
15	Technology Design
16	Management of Material Resources
17	Quality Control Analysis
18	Science
19	Operation Monitoring
20	Equipment Maintenance
21	Troubleshooting
22	Equipment Selection
23	Operation and Control
24	Installation
25	Repairing

Other Relevant Occupation-Specific Competencies

1	Strategizing
2	Financial Analysis
3	Mathematics
4	Statistical Modeling
5	Business Solutions
6	Database Administration
7	Microsoft Project Management Tools
8	Microsoft Business
9	Data Science
10	Financial Reporting
11	Business Software
12	Sales and Business Development
13	Economics
14	Core Operating Systems
15	Employee Training
16	Operations Analysis
17	Validation
18	Business Management
19	Product Management
20	Telecommunications
21	Risk Management
22	Administrative Support
23	Big Data
24	Investment Management
25	Claims Processing



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