



IDC

International Development Company LLC

INTERNATIONAL DEVELOPMENT COMPANY L.L.C

**Advanced Analytics and
Reporting**

About IDC

- IDC operates in the oil, gas, power & water, petrochemical and project construction sectors, delivering services, equipment and know-how with globally leading (more than 100+) partner companies



45

YEARS OF EXISTENCE

IDC is an Abu Dhabi based, well-established company with 4 decades of standing relationship with ADNOC group going back to its inception 43 years ago in 1978

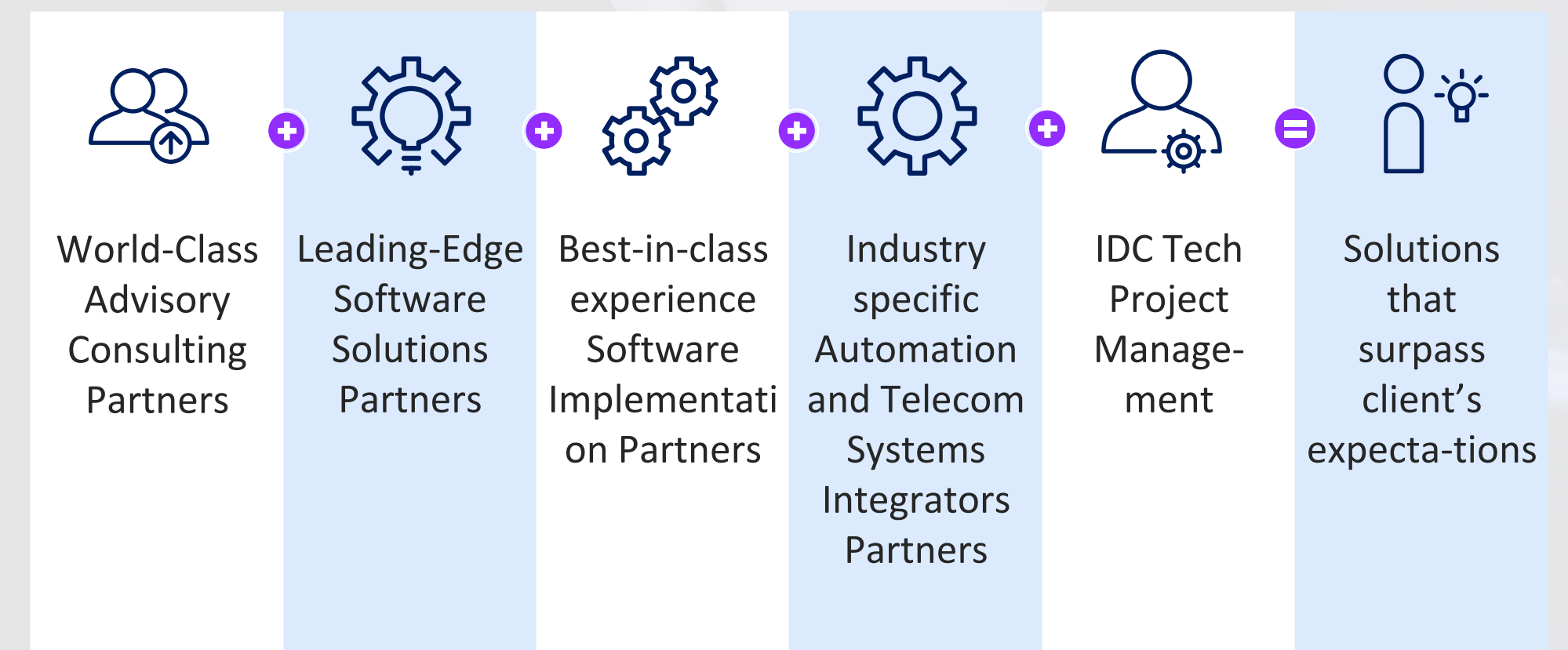
Brief about IDC:

- IDC is known to consistently deliver on its commitments to its clients and principals, and as such, have an unsurpassed track record of excellence as service providers, equipment suppliers, companies' representatives, and project development entity.
- Now with its IDC Technology and Professional Services unit – IDC Tech IDC has diversified into innovative technology services. IDC is committed to bringing the innovative technology product and solutions to the UAE market along with the implementation capabilities directly or with the help of leading partners.



IDC Tech business model

- We have unique capabilities in partnering with cutting edge IT solution providers, access world class specialists and having established partnership with automation and telecom engineering and engineering Service providers
- We undertake challenging Industry oriented digital transformation journeys no matter how complex these are.
- We are in a unique position - due to our deep client relationships and indigenous industry expertise - to undertake pursuits in the areas of Digital Oil Fields, Oil and Gas Production Systems Optimization and Industrial Internet of Things projects, Digital Twins, etc...



About Advanced Analytics and Reporting Project

- Advanced Analytics and Reporting projects encompass a wide range of capabilities designed to transform raw data into meaningful insights that drive informed decision-making. In this document we will share some of the things Advanced Analytics and Reporting can do.
- The technologies used in Advanced Analytics and Reporting projects span a wide array of tools and platforms, tailored to different phases of the design and development process. In this document we will share some of the technologies that can be used in Advanced Analytics and Reporting, along with the types of projects they are typically applied to.



Advanced Analytics and Reporting aspects



1. Data Integration and Management:

- **Data Collection:** Aggregating data from various sources such as databases, APIs, IoT devices, social media, etc.
- **Data Cleansing:** Ensuring data quality by removing duplicates, correcting errors, and handling missing values.
- **Data Storage:** Efficiently storing large volumes of structured and unstructured data in data warehouses, lakes, or cloud storage.

2. Data Analysis:

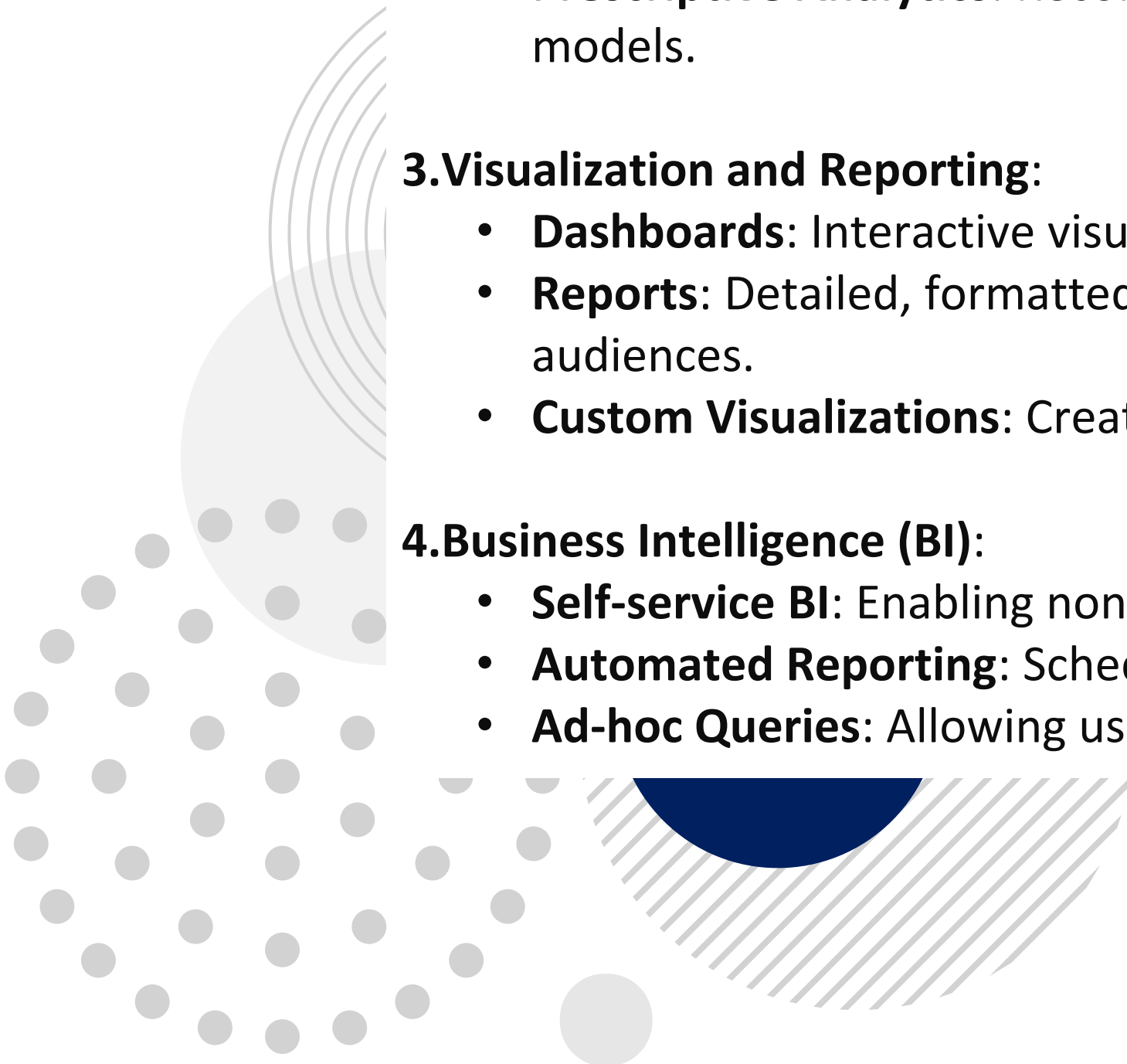
- **Descriptive Analytics:** Summarizing historical data to understand what has happened in the past using metrics and key performance indicators (KPIs).
- **Diagnostic Analytics:** Identifying the root causes of trends and anomalies by drilling down into data and using correlation analyses.
- **Predictive Analytics:** Using statistical models and machine learning algorithms to forecast future trends and behaviors based on historical data.
- **Prescriptive Analytics:** Recommending actions to achieve desired outcomes through optimization techniques and simulation models.

3. Visualization and Reporting:

- **Dashboards:** Interactive visual displays of data, showing real-time metrics and KPIs for quick insights.
- **Reports:** Detailed, formatted documents that present data analyses and insights in a structured manner, often tailored for specific audiences.
- **Custom Visualizations:** Creating bespoke graphs, charts, and maps that help to illustrate complex data relationships and trends.

4. Business Intelligence (BI):

- **Self-service BI:** Enabling non-technical users to create their own reports and analyses through user-friendly tools.
- **Automated Reporting:** Scheduling and distributing reports automatically to relevant stakeholders, reducing manual effort.
- **Ad-hoc Queries:** Allowing users to run custom queries to explore specific aspects of the data as needed.



Advanced Analytics and Reporting aspects



5. Advanced Techniques:

- **Machine Learning:** Implementing algorithms that learn from data to provide advanced insights, such as classification, clustering, and regression.
- **Natural Language Processing (NLP):** Analyzing text data to extract insights from documents, social media, and other text sources.
- **Big Data Technologies:** Leveraging technologies like Hadoop, Spark, and NoSQL databases to process and analyze massive datasets.

6. Industry-specific Solutions:

- **Financial Services:** Risk management, fraud detection, and customer analytics.
- **Healthcare:** Predictive patient care, resource allocation, and outcome analysis.
- **Retail:** Customer segmentation, inventory management, and sales forecasting.
- **Manufacturing:** Predictive maintenance, supply chain optimization, and quality control.

7. Strategic Decision-Making:

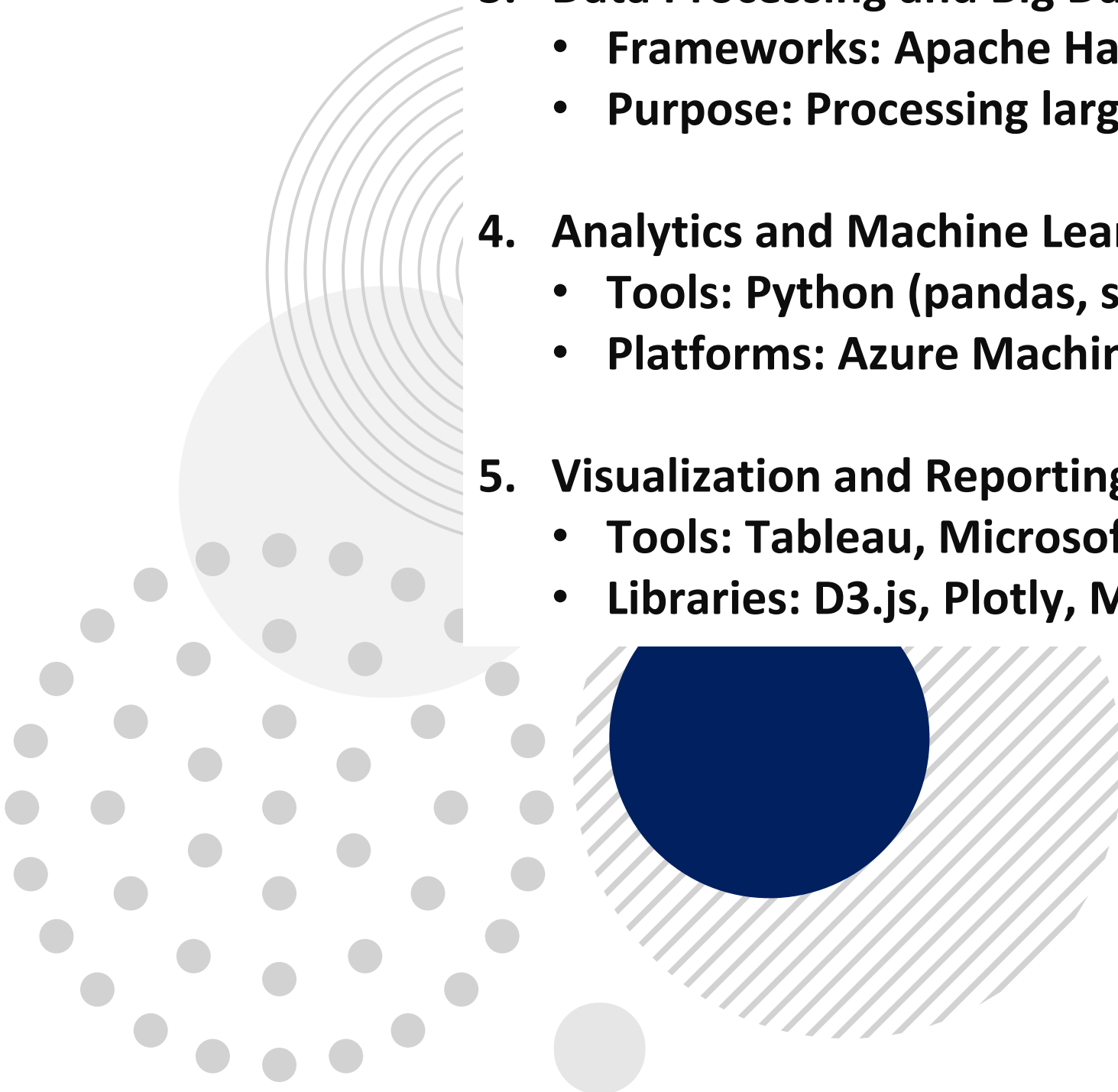
- **Scenario Analysis:** Evaluating the impact of different business scenarios and strategies.
- **Performance Monitoring:** Continuously tracking business performance against goals and benchmarks.
- **Competitive Analysis:** Assessing market trends and competitor performance to inform strategic planning.



Advanced Analytics and Reporting aspects Technologies



- 1. Data Integration and ETL (Extract, Transform, Load):**
 - Tools: Apache NiFi, Talend, Informatica, Microsoft SQL Server Integration Services (SSIS)
 - Purpose: Aggregating and transforming data from multiple sources.
- 2. Data Storage and Management:**
 - Databases: SQL (MySQL, PostgreSQL, Microsoft SQL Server), NoSQL (MongoDB, Cassandra)
 - Data Warehouses: Amazon Redshift, Google BigQuery, Snowflake, Azure Synapse
 - Data Lakes: Apache Hadoop, Amazon S3, Azure Data Lake
- 3. Data Processing and Big Data Technologies:**
 - Frameworks: Apache Hadoop, Apache Spark
 - Purpose: Processing large volumes of data efficiently.
- 4. Analytics and Machine Learning:**
 - Tools: Python (pandas, scikit-learn, TensorFlow, PyTorch), R, SAS, IBM SPSS
 - Platforms: Azure Machine Learning, Amazon SageMaker, Google AI Platform
- 5. Visualization and Reporting:**
 - Tools: Tableau, Microsoft Power BI, QlikView, Looker
 - Libraries: D3.js, Plotly, Matplotlib, Seaborn



Advanced Analytics and Reporting aspects Technologies



6. Business Intelligence (BI):

- Platforms: SAP BusinessObjects, Oracle BI, MicroStrategy
- Features: Self-service BI, automated reporting, ad-hoc querying

7. Natural Language Processing (NLP):

- Libraries: NLTK, SpaCy, BERT, GPT
- Applications: Text analysis, sentiment analysis, document summarization

8. Cloud Platforms:

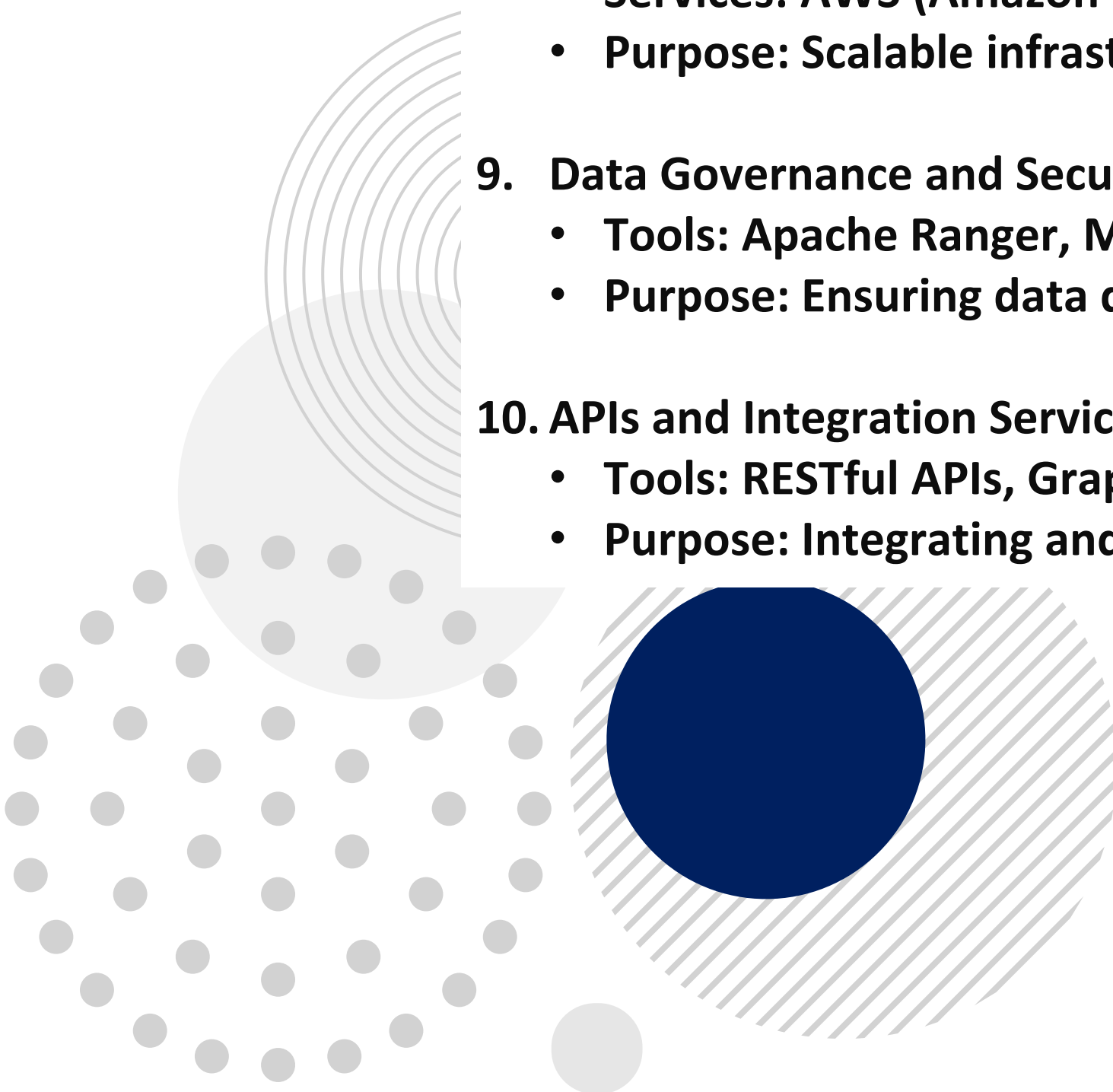
- Services: AWS (Amazon Web Services), Microsoft Azure, Google Cloud Platform (GCP)
- Purpose: Scalable infrastructure for data storage, processing, and analytics

9. Data Governance and Security:

- Tools: Apache Ranger, Microsoft Azure Purview, Collibra
- Purpose: Ensuring data quality, privacy, and compliance

10. APIs and Integration Services:

- Tools: RESTful APIs, GraphQL, Apache Kafka
- Purpose: Integrating and streaming data in real-time.



THANK YOU



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