**1. Define the Business Problem**

**Actions:**

* Meet with stakeholders to understand the business objective (e.g., improve player retention, increase in-game spending).
* Establish clear, measurable goals and KPIs (e.g., DAU, ARPU).
* Align the problem with organizational priorities to ensure relevance.

**2. Data Collection & Integration**

**Actions:**

* Identify and gather data from all relevant sources (game logs, player transactions, user profiles).
* Use Power BI to connect to different datasets (tables) and ensure data availability.
* Governance: Ensure data complies with regulations (GDPR, CCPA) and set data access rules.
* Security: Encrypt sensitive data during collection and ensure proper access controls.

**3. Data Preparation**

**Actions:**

* Clean data by handling missing values, duplicates, and errors.
* Transform data into the appropriate format for analysis (e.g., standardize player IDs, normalize spending data).
* Governance: Document data sources and transformations for transparency.
* Security: Anonymize PII and ensure data protection standards are followed.

**4. Exploratory Data Analysis (EDA)**

**Actions:**

* Visualize initial data using Power BI (e.g., histograms, scatter plots) to identify patterns, trends, and outliers.
* Examine data distribution and correlation between key variables (e.g., session time vs. spending).
* Governance: Validate data quality and consistency before diving deeper.
* Security: Restrict access to sensitive data during the exploration phase.

**5. Define Metrics & KPIs**

**Actions:**

* Identify key metrics relevant to the business problem (e.g., retention rate, lifetime value, churn).
* Ensure KPIs are measurable, consistent, and aligned with business goals.
* Governance: Standardize definitions of metrics across teams for consistency.
* Security: Ensure metrics do not expose sensitive user information unless necessary.

**6. Advanced Analysis & Modeling**

**Actions:**

* FOR FUTURE PROJECT - Apply statistical or machine learning models to analyze the data (e.g., churn prediction, cohort analysis).
* Use Power BI's DAX and Power Query to create advanced calculations and insights.
* Governance: Ensure models are transparent, reproducible, and documented.
* Security: Protect models and sensitive data used in predictions by using role-based access.

**7. Data Visualization & Insights Delivery**

**Actions:**

* Create interactive Power BI dashboards that clearly communicate insights to stakeholders (e.g., player activity trends, revenue insights).
* Use visuals like bar charts, heatmaps, and line graphs to highlight key findings.
* Governance: Make sure visualizations are aligned with business needs and provide actionable insights.
* Security: Use Power BI’s security features to restrict access to sensitive reports and ensure authorized viewing.

**8. Results Interpretation, Feedback & Iteration**

**Actions:**

* Present insights and recommendations to stakeholders in clear, actionable terms.
* Collect feedback and refine analysis based on stakeholder input.
* Governance: Track changes and document all iterations for transparency and consistency.
* Security: Regularly review data access permissions and ensure sensitive information is safeguarded.
* Data Governance & Security Considerations Across All Steps
* Governance: Maintain data quality standards, document sources and transformations, ensure regulatory compliance, and standardize metric definitions.
* Security: Implement encryption for sensitive data, use role-based access control, anonymize personal data where possible, and regularly review access rights to ensure data protection.