PGB

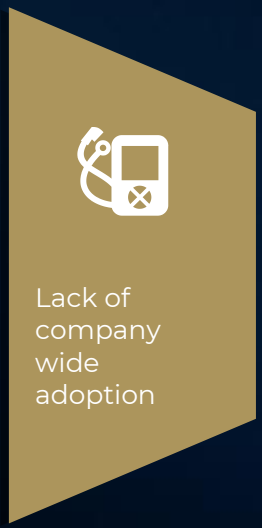
Business Intelligence Issues And Challenges

Module 4

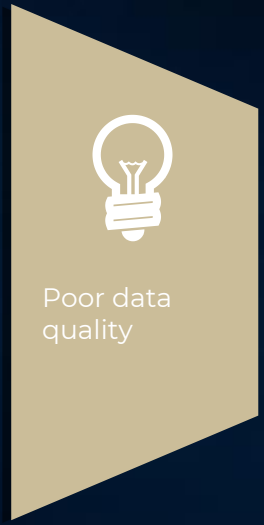
Contents

01

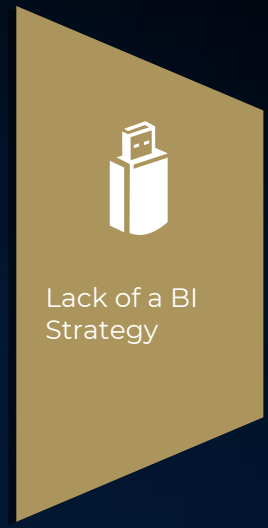
Critical Challenges for Business Intelligence success



Lack of company wide adoption



Poor data quality



Lack of a BI Strategy

Measuring the right indicators

Resistance, lack of awareness, and cultural aversion hinder widespread adoption of business intelligence practices. Inaccurate, incomplete, or inconsistent data undermines the reliability and usefulness of business intelligence insights.

Delivering mobile BI

Technical and usability challenges arise in providing a seamless mobile BI experience.

Creating self-service analytics

Designing user-friendly tools for independent data analysis requires effort and data accessibility management.

Too expensive and hard to justify ROI

Obtaining support and resources for BI initiatives can be difficult due to intangible or delayed RO

Analyzing data from different data sources

Integrating and analyzing data from diverse sources presents complexities and requires data consistency and cleansing.

Overcoming these challenges requires addressing organizational culture, investing in data quality management, developing a well-defined BI strategy, aligning KPIs with business objectives, adopting mobile-friendly BI solutions, implementing self-service analytics capabilities, conducting cost-benefit analysis, and establishing effective data integration and governance practices.

Poor Interactivity

Inadequate interactivity in business intelligence tools can limit users' ability to explore data, perform ad-hoc analysis, and gain deeper insights. Lack of interactive features and intuitive user interfaces can hinder the usability and effectiveness of the BI solution.

Sluggish database performance

Slow query execution and database performance issues can significantly impact the speed and responsiveness of business intelligence systems. Long wait times for data retrieval and analysis can hinder productivity and decision-making.

Evolving technology landscape

The rapid evolution of technology introduces challenges in selecting, implementing, and keeping up with the latest tools and platforms for business intelligence. Staying updated with new technologies, ensuring compatibility, and managing migration processes can be complex.

01 Managing the Use of Self-Service BI Tools

02 Low Adoption of BI Tools

02

The Importance of Cross-Organizational Collaboration in Business Intelligence

Holistic view

Collaboration brings together diverse perspectives and expertise, allowing for a comprehensive understanding of the organization's data and processes

1

2

Data integration

Collaborative efforts break down data silos and establish standardized processes for effective data integration across departments

3

4

Enhanced insights

Collaborating with different stakeholders allows for the generation of deeper insights by leveraging domain knowledge and uncovering hidden connections.

Data governance

Collaboration enables the establishment of data governance practices, including defining data standards, ensuring data quality, and complying with regulations.

Customer-centric approach

Sales and marketing bring a customer-focused perspective to the business intelligence project, ensuring that customer needs and preferences are at the forefront of decision-making.

Customer insights

Customer behavior, preferences, and market trends

Targeted marketing strategies

Identify target customer segments, analyze their behavior, and develop targeted marketing strategies to improve customer acquisition and retention

Sales performance analysis

Real-time visibility into sales performance, pipeline analysis, and customer buying patterns

By addressing the specific needs of these stakeholders, the development of the business intelligence system can align with their requirements, ensuring that the system provides the necessary data and insights to support their decision-making processes effectively.

Executives and senior management

Operations teams

Department managers

Sales and marketing teams

Advocacy and support

Overcome resistance, secure resources, and drive the project forward.

Decision-making authority

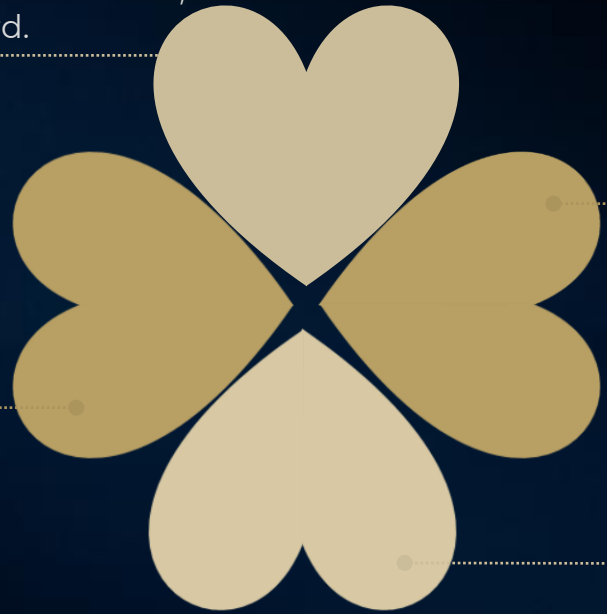
Allocate resources, approve budget

Strategic alignment

Key metrics and performance indicators

Executive perspective

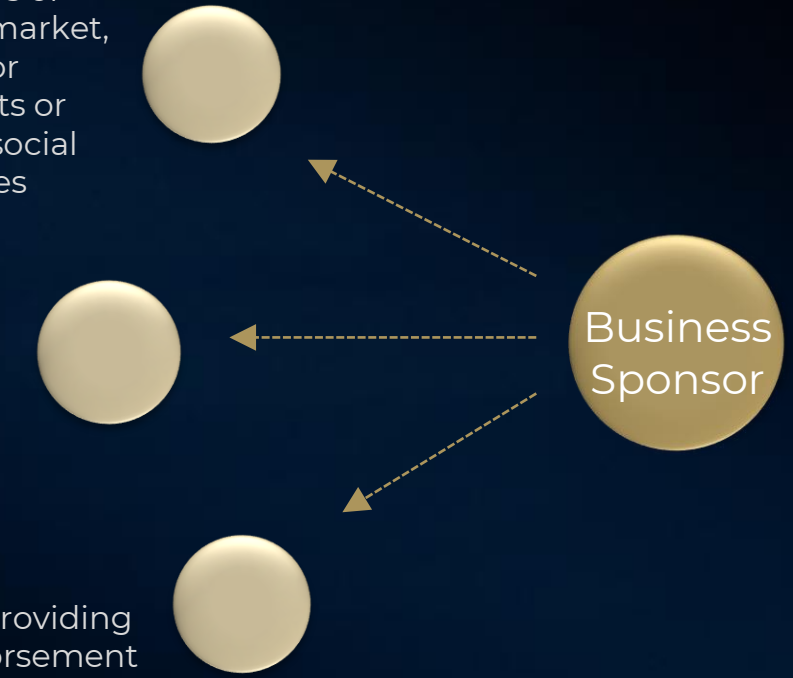
Shape the system's design and functionalities



They can be financial backers, underwriters, or investors in private companies, creators of demand in the securities market, endorsers of movements or brands, supporters of sports or events, or contributors to social and philanthropic initiatives

Sponsors play a crucial role in providing financial backing, expertise, reputation, or resources to facilitate growth, development, and success.

Sponsors play a vital role in providing support, resources, and endorsement to help achieve the objectives and success of the sponsored entity.



Business Sponsor

Sponsors can refer to individuals or entities that provide support, resources, or endorsement to help achieve the goals and objectives of another individual or organization

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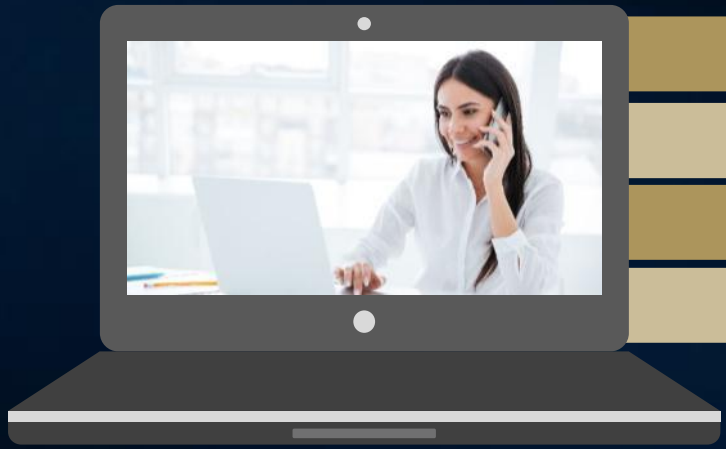
Business Representation



80% Performing Due Diligence

70% Developing a Strategy and Business Plan

60% Establishing a Local Team

40% Product Readiness

Conducting thorough due diligence, developing a well-defined strategy and business plan, and establishing a local team. It is important to ensure product and organizational readiness, along with legal and tax compliance. Creating a go-to-market strategy and establishing close relationships with local businesses are vital steps. Financial planning, budgeting, and building strong partnerships contribute to successful market representation and achieving business goals.

Organizational Readiness

Establishing a Go-to-Market Strategy

Legal Readiness

Tax and Finance Readiness

Business Requirements

01 Preparation of your Final Budget

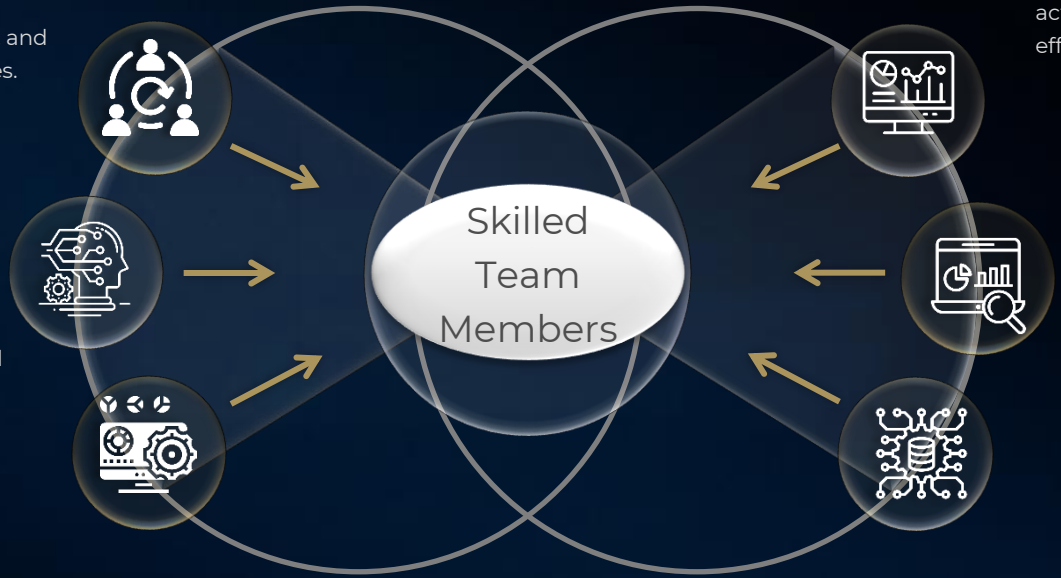
02 Establish Close Relationships with Local Businesses

Networking

Networking allows you to establish connections with key individuals and organizations within the market, providing opportunities for collaboration, partnerships, and access to valuable resources.

Delegation

Effective delegation ensures that work is distributed efficiently, allowing each team member to focus on their strengths and contribute effectively to the overall business representation efforts



BI Developers

Help collect, analyze, and visualize data, empowering businesses with actionable insights and facilitating effective business representation.

IT Skills

IT skills include proficiency in software applications, database management, cybersecurity, and other relevant areas to ensure smooth operations and effective data management.

Data Analytics

Skilled professionals in data analytics can analyze and interpret data to extract valuable insights, enabling informed decision-making and strategic planning.

Database Administration (DBA)

DBAs are responsible for managing and maintaining databases, ensuring data integrity, security, and efficient data retrieval. Their expertise in database management is crucial for organizing and accessing relevant data for business representation purposes.

04

Business Intelligence Application Development Methodology

Data Collection

Gather data from various systems within the organization, such as CRM, MIS, and ERP, to ensure a comprehensive and holistic view of the business.

Data Interpretation and Visualization

Analyze and interpret complex data and transform it into visually appealing and easy-to-understand formats using charts, graphs, grids, maps, and other graphical media.

Mapping to User Requirements

Align the development of Business Intelligence solutions with specific user requirements to ensure that the resulting applications meet their needs and expectations.

Performance-Centric Development

Develop BI solutions with a focus on performance, utilizing a robust and expandable framework

Business Intelligence Application Development Methodology

Multiple Graphical Views

Present data in multiple graphical views, such as grid view and chart view, allowing users to analyze information from different perspectives

Export Functionality

Enable the export of data into various formats, such as Microsoft Excel, CSV, XML, etc., to facilitate data sharing, further analysis, and integration with other systems.

Leveraging Existing Technology Investments

Build BI solutions on top of existing technology investments to minimize development costs and maximize returns. This approach ensures compatibility and integration with existing systems, optimizing resources and reducing implementation efforts.

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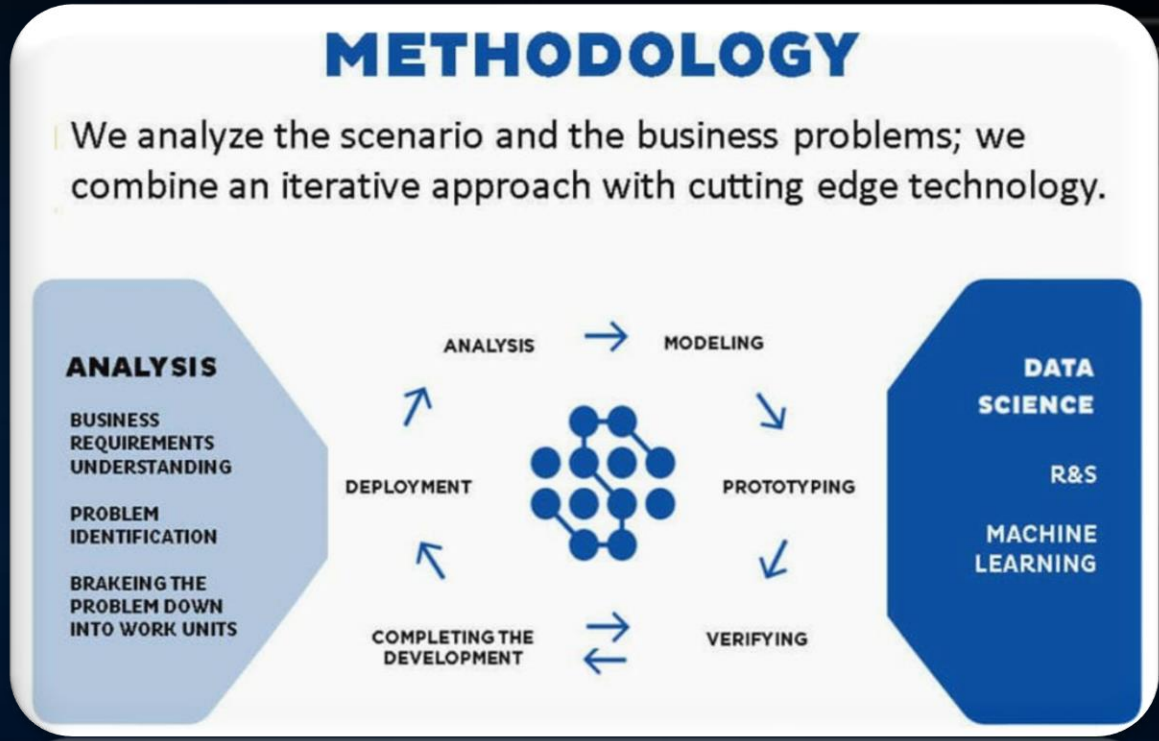

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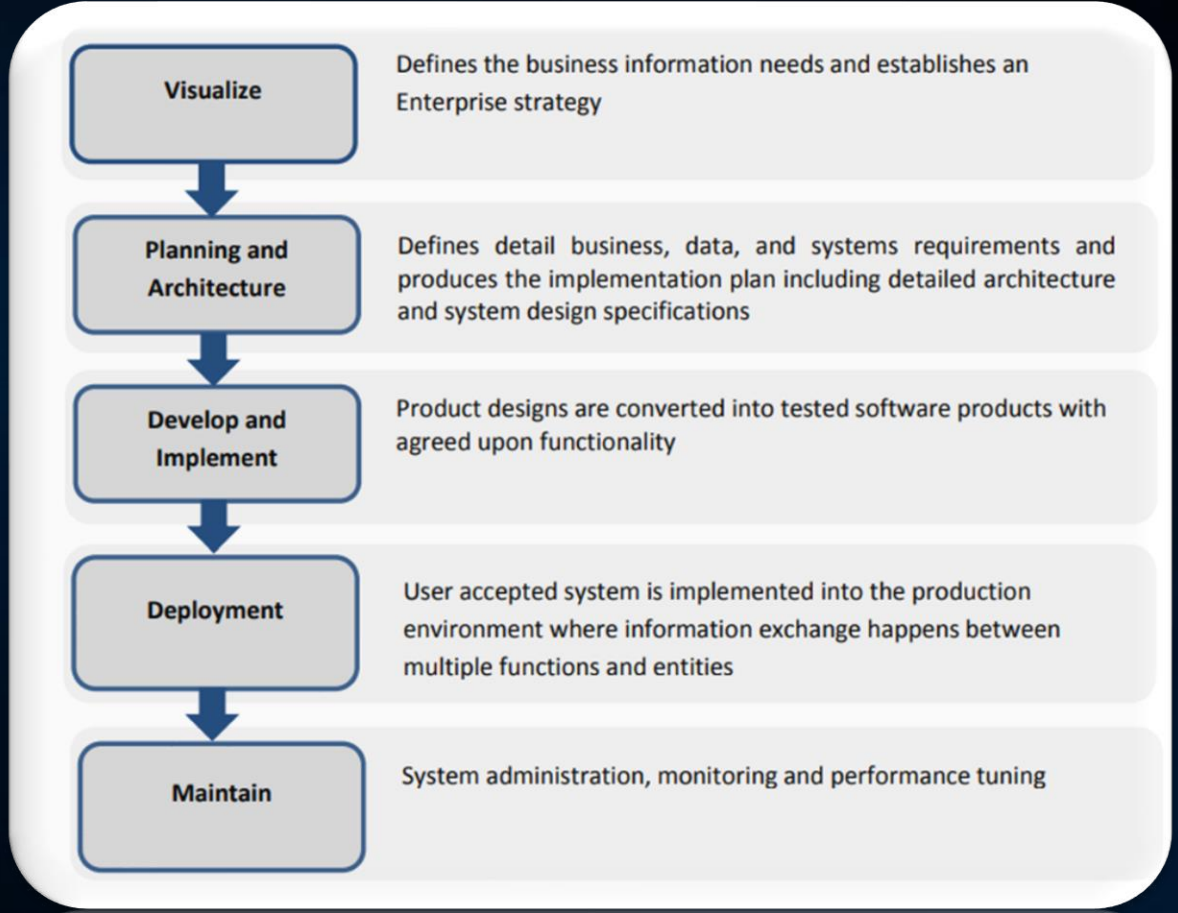

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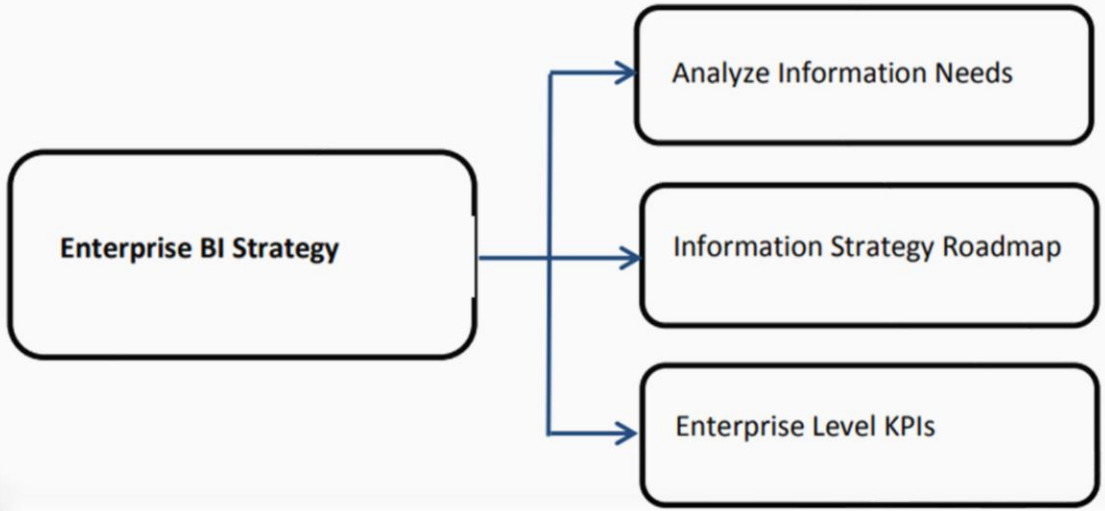
Objectives:

- Analyze information needs
- Information Strategy Roadmap
- Enterprise level KPIs



Define Requirements

Analyze Source systems and Technical Environment

Design Solution Architecture

By following a well-defined planning and architecture phase, organizations can ensure that their Business Intelligence solutions are aligned with their requirements, leverage existing technical capabilities, and provide a robust and scalable architecture to support data analysis and decision-making processes.

Define Requirements

- Define Attributes: Determine the specific data attributes or variables that need to be captured and analyzed within the Business Intelligence solution.
- Define Measures: Identify the quantitative measures or metrics that will be used to evaluate and analyze the data.
- Identify Granularity: Determine the level of detail or granularity at which the analysis will be conducted, such as customer level, product level, or time period.

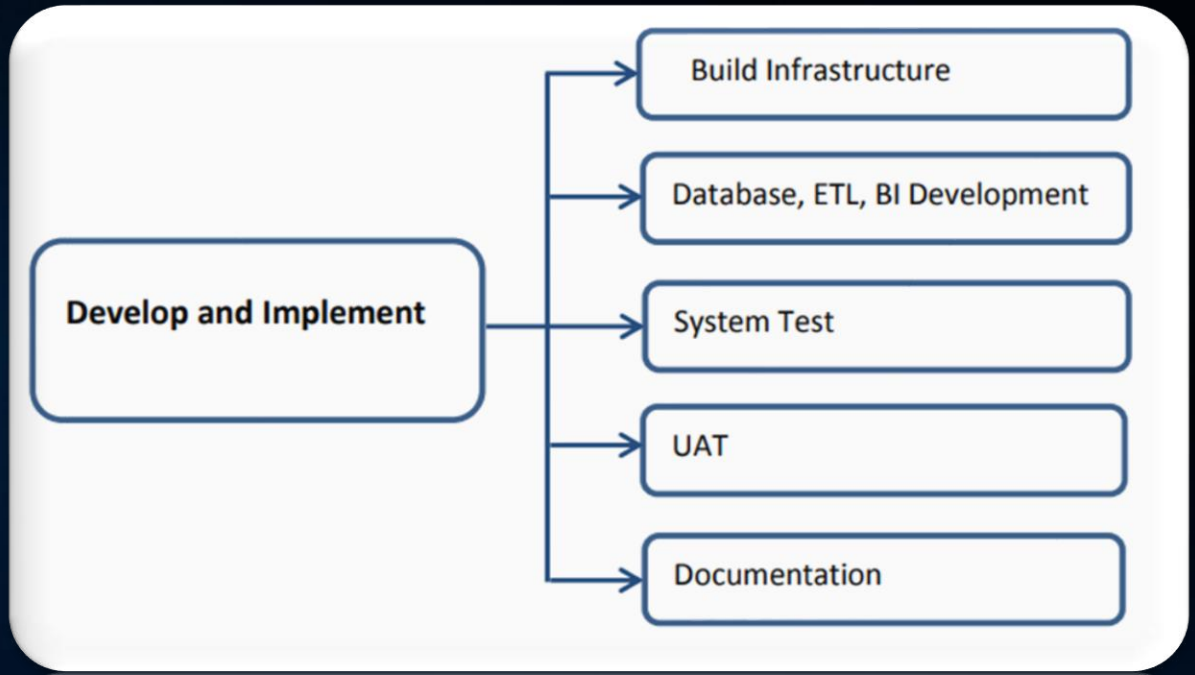
02

Analyze Source systems and Technical Environment

- Analyze Source Systems and Identify Gaps: Assess the existing source systems within the organization and identify any gaps in terms of data availability, quality, or integration requirements for the Business Intelligence solution.
- Analyze Technical Environment: Evaluate the technical infrastructure and capabilities of the organization, including hardware, software, and network resources, to ensure they can support the planned BI solution.

Design Solution Architecture

- Overall System Architecture: Define the overall architecture of the Business Intelligence solution, including the integration of data sources, data storage, processing, and presentation layers.
- Data Architecture: Determine the structure and organization of the data within the BI solution, including data models, data storage, and data integration processes.
- ETL (Extract, Transform, Load) Architecture: Design the processes and workflows for extracting data from source systems, transforming it into a suitable format for analysis, and loading it into the BI solution.
- BI Application Architecture: Design the user interface, visualization components, and reporting capabilities of the BI application, ensuring it meets the needs of the end-users and provides an intuitive and interactive experience.



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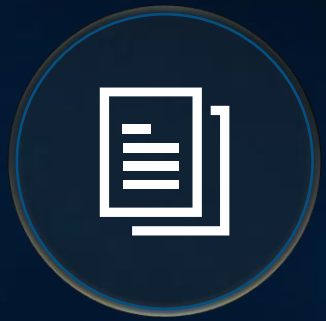
Deployment and Maintenance



Deployment Readiness

- Ensure that the Business Intelligence solution is fully tested and ready for deployment to the production environment.
- Validate that all components, including data sources, ETL processes, and BI applications, are functioning correctly.
- Conduct user acceptance testing to confirm that the solution meets the requirements and expectations of the stakeholders.

Production Deployment

- Implement the Business Intelligence solution in the production environment.
- Ensure proper configuration and setup of hardware, software, and network infrastructure.
- Migrate data from the staging environment to the production environment.
- Conduct thorough testing and validation in the production environment before making the solution available to end-users.

Administration and Monitoring

- Establish a system for ongoing administration and monitoring of the Business Intelligence solution.
- Assign responsibilities for managing user access, security settings, and system maintenance tasks.
- Monitor the performance and availability of the solution, proactively identifying and resolving any issues that may arise.
- Regularly backup and maintain data to ensure data integrity and reliability.

Performance Tuning

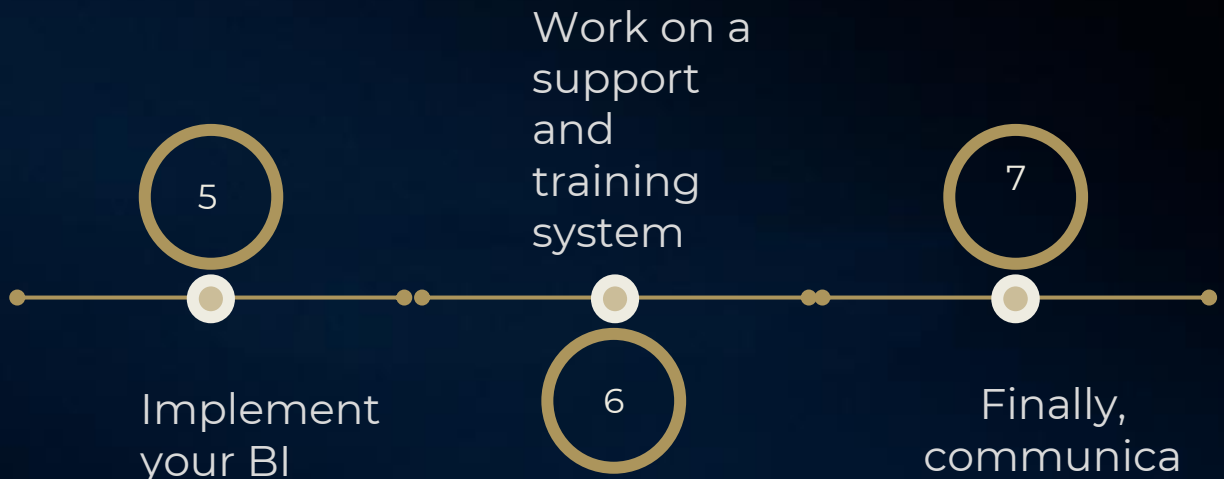
- Continuously optimize the performance of the Business Intelligence solution to ensure fast and efficient data processing and retrieval.
- Identify and address any bottlenecks or performance issues through techniques such as query optimization, indexing, and caching.
- Monitor system performance metrics and analyze trends to make informed decisions on infrastructure upgrades or

05

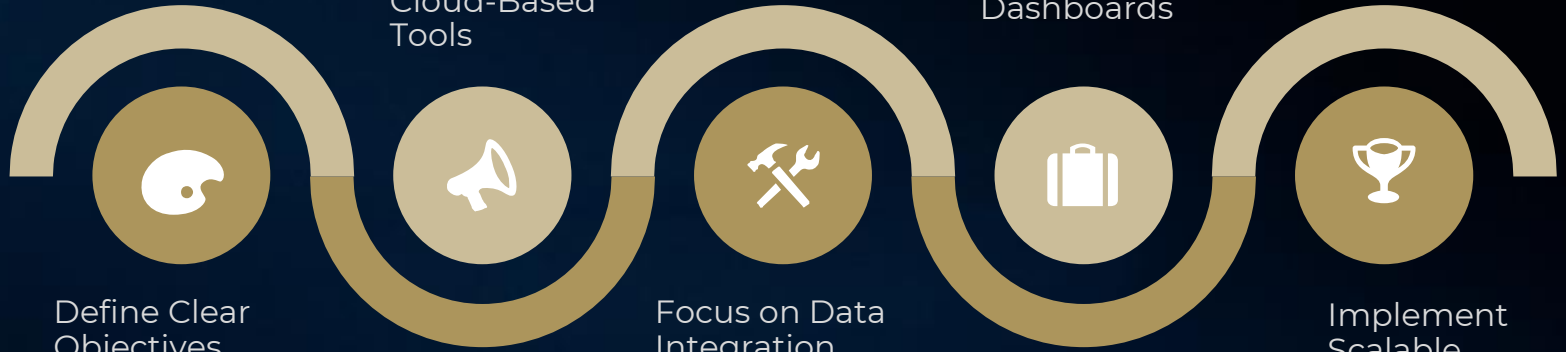
Planning the BI Projects


Create a solid BI implementation project plan
01
Define goals and objectives
02
Consult with key stakeholders
03
Keep in mind your team and budget
04
Clear the clutter and define a timeframe
05
Step back from the computer
06


1
Define your data sources and gather the data
2
Clean your data and assess the quality
3
Implement a data governance plan
4
Concentrate on technicalities


5
Implement your BI solution and measure success
Work on a support and training system
6
7
Finally, communica te regularly

Creating Cost Effective Enterprise friendly BI solution



01 Train and Empower Users

02 Monitor Performance and Optimize

Affordable BI Solutions for Startup Companies Table of Contents

Top Vendors

Power BI and Tableau has left the chat

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BI Applications

Healthcare

- Image Analysis in Medicine: Data science algorithms analyze medical images to assist in accurate diagnoses and treatment planning.
- Genetics and Genomics: Data science techniques help in genomic sequencing and analyzing genetic data for personalized medicine and disease prevention.
- Drug Development: Data science is used to predict drug efficacy and side effects, speeding up the drug discovery and development process.
- Virtual Assistants and Health Bots: Data science powers virtual assistants and health bots that provide personalized healthcare advice and support.

Targeted Advertising

- Advanced Ad Targeting: Data science algorithms analyze user data to deliver targeted ads based on individual preferences and behaviors.
- Personalized Marketing Campaigns: Data science enables businesses to create personalized marketing campaigns that resonate with specific customer segments.
- Real-time Ad Optimization: Data science techniques help optimize ad placements and bidding strategies in real-time to maximize advertising effectiveness.

Website Recommendations

- Personalized Content Recommendations: Data science algorithms analyze user behavior and preferences to recommend relevant products, articles, or content.
- Improved User Experience: Data-driven website recommendations enhance user engagement, increase conversions, and encourage repeat visits.

E-Commerce

- Customer Segmentation: Data science techniques segment customers based on their purchasing behavior and preferences for targeted marketing efforts.
- Sentiment Analysis: Data science helps analyze customer reviews and feedback to gain insights into product sentiment and improve customer satisfaction.
- Dynamic Pricing: Data science algorithms optimize pricing strategies based on demand, competition, and customer behavior.

Transportation

- Route Optimization: Data science helps optimize transportation routes, reducing fuel consumption and improving delivery efficiency.
- Traffic Management: Data analysis and modeling contribute to better traffic management systems, reducing congestion and improving travel times.
- Predictive Maintenance: Data science techniques analyze vehicle sensor data to predict maintenance needs, reducing downtime and improving fleet performance.

Text and Image Recognition

- Speech Recognition: Data science algorithms enable accurate speech recognition for virtual assistants and voice-controlled devices.
- Image Analysis: Data science techniques analyze and interpret images for applications like facial recognition, object detection, and medical imaging.

Security

- Fraud Detection: Data science algorithms identify patterns of fraudulent activities by analyzing large volumes of transaction data, enhancing security measures.
- Anomaly Detection: Data science helps detect unusual or suspicious behavior in systems, alerting businesses to potential security threats.

Customer Insights

- Customer Behavior Analysis: Data science enables businesses to analyze customer data and uncover valuable insights into purchasing patterns, preferences, and loyalty.
- Market Segmentation: Data-driven market segmentation helps businesses target specific customer segments with tailored marketing strategies.


THANK YOU