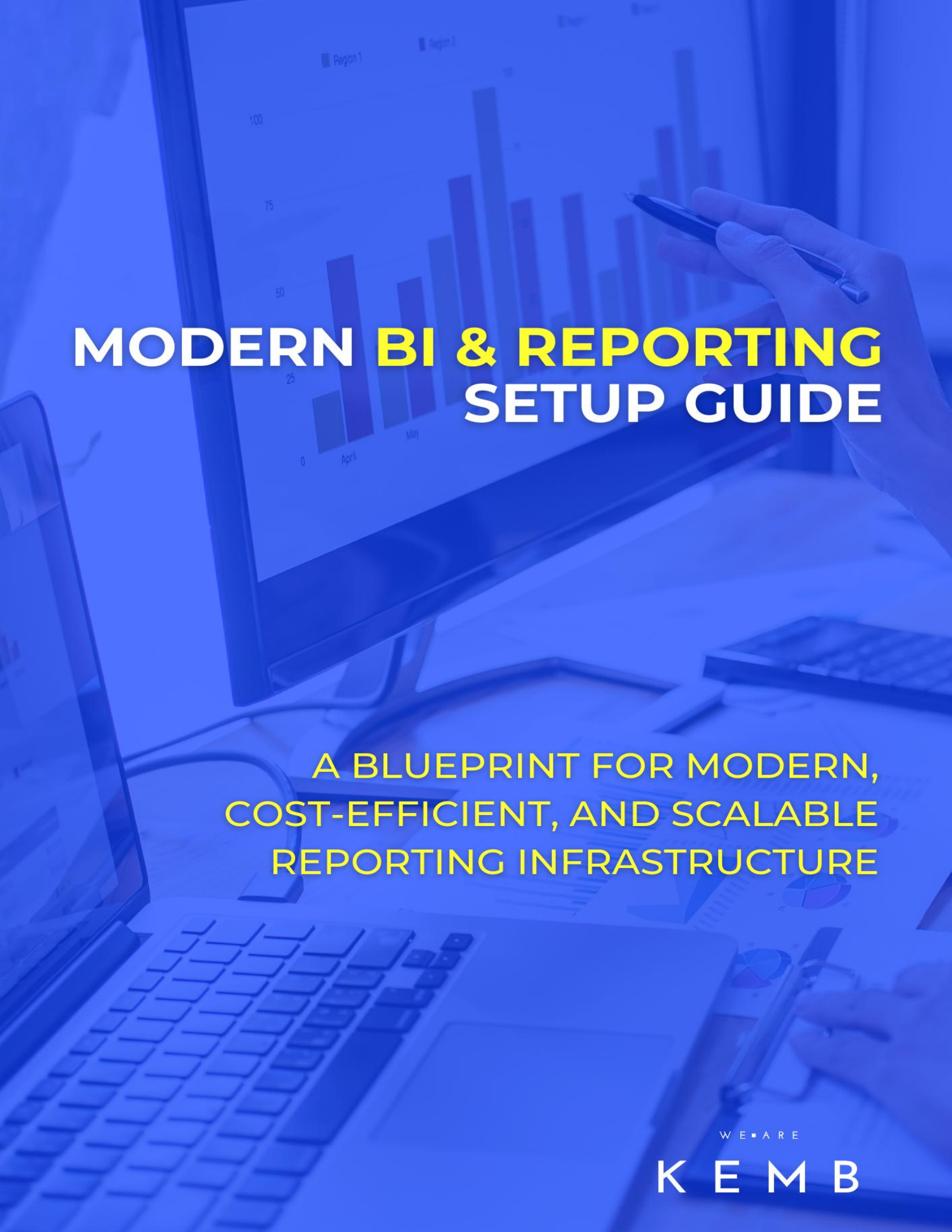




MODERN **BI & REPORTING** SETUP GUIDE

A BLUEPRINT FOR MODERN,
COST-EFFICIENT, AND SCALABLE
REPORTING INFRASTRUCTURE

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Why we wrote this guide

Modern BI and Reporting systems are no longer a “nice-to-have”, they’re a competitive necessity.

Whether you’re an **eCommerce retailer, SaaS provider, hotel chain, hospital, or financial institution**, the challenge is the same:

- Disconnected systems create blind spots.
 - Inefficient processes waste time and money.
 - Reports lack clarity and trustworthiness.
-

About This Guide

This guide distills years of experience in **business intelligence, data infrastructure modernization, and growth analytics** into a practical framework for building a modern reporting setup that is accurate, scalable, cost-efficient, trustworthy, easy to maintain and designed for operators, not just analysts

It also incorporates insights from our internal knowledge base and transformation resources so that readers can go deeper where needed.

This guide is written for **SMB (Small and Medium Businesses) owners, mid-market data and operations leaders, and marketing/growth teams** who need a clear path toward a stable, future-ready reporting ecosystem.

How to Use This Guide

If you're building your reporting setup in-house:

Follow the recommended steps in each section. They are tool-aware, tested in the field, and reflect a balance of performance, governance, and budget constraints.

If you're assessing your BI Infrastructure:

Use the industry sections as benchmarks to understand where your current setup sits and what "good" looks like for organizations like yours.

If you're evaluating external support:

The guide makes clear where Kemb's expertise accelerates outcomes, particularly in areas like BI maturity assessment, BI infrastructure setup, BI infrastructure migration, digital transformation, analytics migration, and marketing performance analytics.

Core Principles for All Industries

Modern reporting helps organizations make decisions with a clear, trusted picture of what is happening in the business and the principles in this section define what "good" looks like in any environment. These principles form the backbone of a reporting ecosystem that's scalable as teams grow, systems multiply, and data complexity increases.

They also mirror the foundations laid out in [Kemb's BI Framework Assessment](#), which has helped organizations understand where they stand today and how ready they are for true data-driven decision-making.

1. Data Accuracy & Transparency

Why this matters

Data is only useful if stakeholders trust it. Mismatched KPIs, unexplained metric variations, or silent pipeline failures erode confidence and fuel poor decisions.

What to do

- **A unified business glossary:** A shared glossary creates one authoritative definition for KPIs so teams stop debating which number is right and start operating from the same source of truth.



Image: KPI Glossary

- **Automated anomaly detection:** Anomaly detection acts as an early-warning system, catching unusual spikes or drops before they surface in dashboards, keeping teams focused on real trends instead of data errors.

- **Metric lineage:** Lineage shows where a metric originated, how it was transformed, and which rules shaped it. When stakeholders can trace a number end-to-end, trust grows and decision-making accelerates.

2. Modern Data Infrastructure

Modern reporting relies on a stable, scalable data infrastructure that can keep up as data sources grow and questions become more complex. The foundation you build determines whether reporting accelerates decision-making or becomes a bottleneck. A key part of this principle is choosing the right tools across ingestion, storage, transformation, and visualization. The tools you select shape how efficiently data moves through your organization and how easily teams can trust and act on insights. In short, the right infrastructure and the right tooling sets the stage for clarity, speed, and sustainable reporting. A practical modern infrastructure follows a layered architecture:

Ingestion Layer – Choose ingestion tools or processes that support automated, reliable extractions while adhering to data privacy requirements. Options like **Fivetran**, **Airbyte**, or **Supermetrics** streamline data collection from marketing, sales, and operational systems and reduce manual overhead.

Warehouse Layer – Your storage needs and data volume should guide your choice of warehouse. You want a platform that scales with your business, not the other way around. Common choices include **BigQuery** (ideal for SMBs; serverless with predictable costs), **Snowflake** (high performance with fine-grained cost control), and **Redshift** (well-suited for AWS-centric teams).

Transformation Layer – Tools such as **dbt** (Cloud or Core) or **Coalesce** support modular, version-controlled data modeling. They help standardize business logic and ensure your data remains trustworthy and maintainable as complexity increases.

Visualization Layer – Select a BI tool that aligns with how your teams consume data. Examples include **Metabase** (simple, fast, and low-cost), **Looker Studio** (free and marketing-friendly),

Power BI (enterprise-ready with strong modeling capabilities), and **Tableau** (best-in-class visualizations for more advanced analysis).

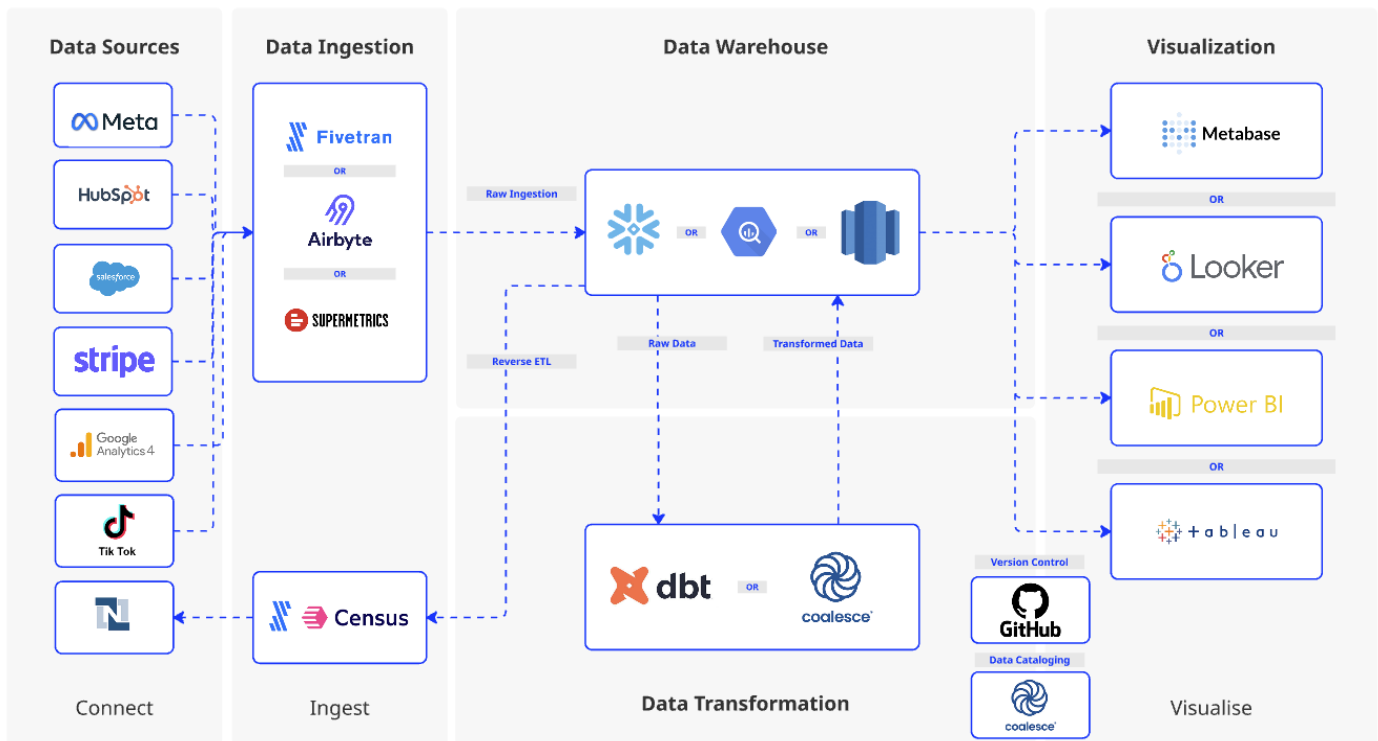


Image: Modern Data Infrastructure

3. Cost Optimization

Cost should not be treated as an afterthought in modern reporting. A well-structured setup anticipates how data volumes, queries, and user behavior will grow over time, and it builds in safeguards to prevent silent budget creep. By treating cost management as part of your data strategy rather than a reactive exercise, you create a reporting ecosystem that remains efficient, predictable, and sustainable.

Key levers include:

- **Partition warehouse tables** by date or customer to limit the amount of data scanned and improve performance.

- **Use clustering** to further reduce scan costs and speed up queries on commonly filtered fields.
- **Archive or retire unused dashboards**, reports, and datasets to prevent unnecessary compute and storage overhead.
- **Schedule compute-heavy jobs during off-peak hours** to take advantage of lower-cost processing and reduce contention with live workloads.

4. Data Visualization with a UX Mindset

Dashboards are products and like any good product, they succeed when they're intuitive, purposeful, and easy to navigate. Applying UX principles to reporting doesn't just make dashboards look better; it dramatically increases adoption, trust, and decision-making speed. When teams understand what they're seeing and why it matters, they're far more likely to rely on data instead of instinct.

Some UX Principles to apply include:

- **Information hierarchy** – Structuring dashboards so the most important metrics and insights appear first, guiding users naturally from high-level KPIs into deeper detail.
- **Cognitive simplicity** – Reducing visual noise and keeping the focus on a small, meaningful set of metrics to avoid overwhelming the user.
- **Visual consistency** – Using a coherent set of colors, fonts, and layout patterns to reinforce clarity and brand identity.
- **Contextual storytelling** – Pairing charts with brief explanations or narrative cues that help users interpret what they're seeing and understand the implications.

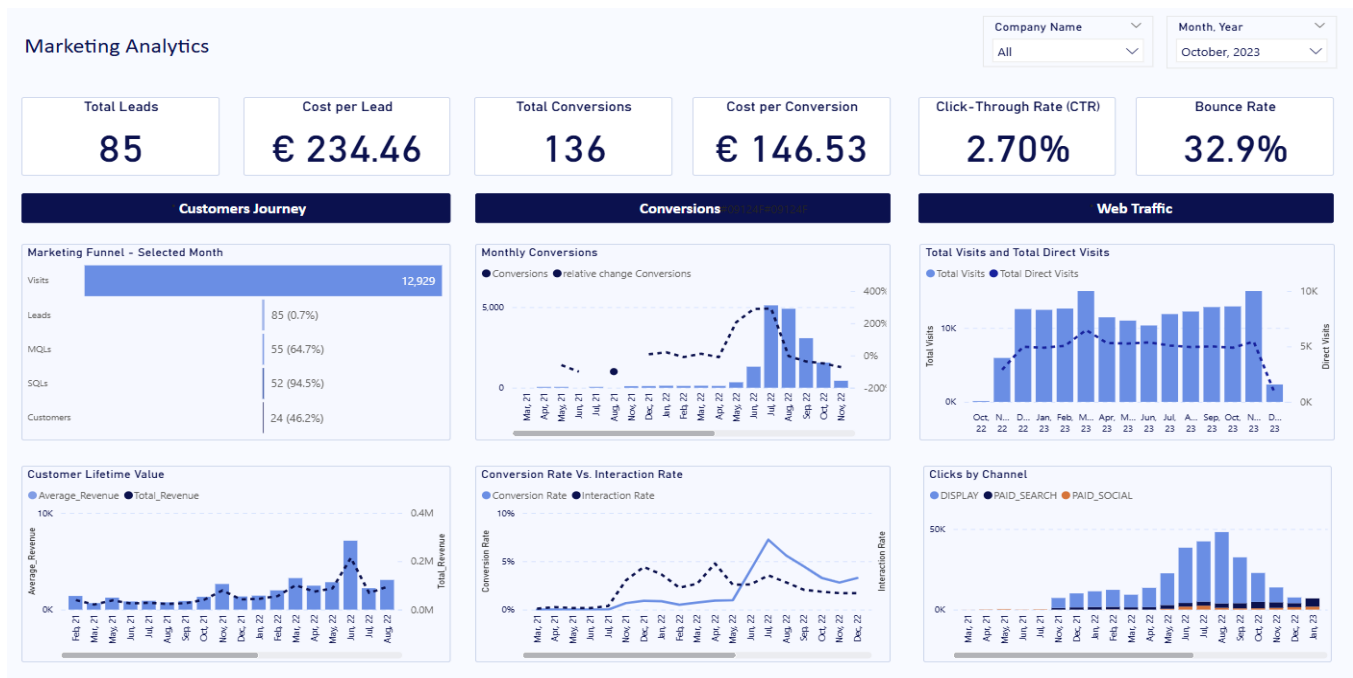


Image: Sample Dashboard

5. Security & Governance

Strong governance builds trust in your data, even outside regulated industries. When access is controlled and sensitive information is protected, teams gain confidence in the reporting system and rely on it more consistently. Good governance also reduces operational risk and prepares your organization for future compliance needs.

Key frameworks to implement include:

- **Role-Based Access Control (RBAC):** Aligns data access with user responsibilities.
- **Data encryption:** Protects information in transit and at rest.
- **Audit logging:** Tracks interactions with sensitive tables for accountability.
- **Masking or pseudonymization:** Safeguards Personally Identifiable Information (PII) while preserving analytical value.

Resources: [Exploring Modern Data Governance Frameworks](#)

6. Sustainability & Maintainability

A modern reporting system shouldn't need to be rebuilt every time your business evolves. It should scale naturally, adapt to new data sources, and remain reliable even as teams, tools, and requirements change. Sustainable design ensures that your reporting foundation becomes an asset that grows with the organization, not a constant source of rework.

Key patterns include:

- **Infrastructure-as-code:** Enables consistent, repeatable environments and reduces the risk of configuration drift.
- **Modular SQL:** Breaks complex logic into manageable components, making models easier to debug, extend, and collaborate on.
- **Internal “data champions”:** Empowered users who support adoption, advocate for data quality, and help embed analytics into daily decision-making.

Quick Architecture Blueprint

A modern BI infrastructure follows a simple, repeatable sequence. Use this as a checklist to ensure your reporting foundation is built for accuracy, scale, and long-term reliability.

A complete setup should:

- **Ingest data automatically** from all key sources.
 - **Store raw data first** to preserve auditability.
 - **Model data into clean, dimensional structures** for consistent analysis.
 - **Document and test** core metrics to maintain trust.
 - **Visualize insights** through dashboards designed for real users.
 - **Monitor pipelines and costs** to catch issues early.
 - **Iterate continuously** as KPIs and business needs evolve
-

Industry-Specific BI Implementation Recommendations

1. SMB: E-Commerce & SaaS

What We Assume About Your Business

You are an e-commerce or SaaS company operating with lean teams, fast-moving growth goals, and a data stack scattered across platforms like Shopify, Stripe, GA4, multiple ad networks, and CRM or lifecycle tools. You need clear visibility into CAC, ROAS, LTV, retention, funnels, and attribution but current reporting is fragmented, slow, or overly manual.

Factors Considered

The recommended setup accounts for:

- Lean operational capacity
 - Frequent experimentation across marketing and product
 - Dependence on accurate attribution and lifecycle metrics
 - The need for predictable, scalable costs
 - Rapid and sometimes unpredictable growth
-

BI Infrastructure Recommendation for SMB:E-Commerce & SaaS

1. Data Ingestion Layer

Tool Recommendation

Fivetran (Recommended)

- **Pros:** Fast deployment, strong Shopify/Stripe/GA4 connectors, automated schema updates
- **Cons:** Can get expensive with high sync volumes
- **Best For:** Teams needing reliability and speed with minimal engineering effort

Airbyte (Open-source alternative)

- **Pros:** Flexible, customizable, cost-effective
- **Cons:** Requires engineering/DevOps support
- **Best For:** Teams with internal technical capability

Supermetrics (no-code option)

- **Pros:** Very fast setup, marketing-focused connectors, no-code
- **Cons:** Limited scope outside marketing; pricing grows with usage
- **Best For:** Growth teams needing fast insights without engineering involvement

Recommended Approach

- **Create connectors** for Shopify/Stripe/GA4 and all marketing channels
- Set daily data sync cycles unless your use case requires more frequent syncs
- Enable Slack/email alerts to stay on top of connector issues
- Store ingestion logs for root-cause analysis

Why We Recommend Fivetran

Fivetran aligns best with the realities of SMB e-commerce/SaaS teams: limited technical bandwidth, the need for highly reliable connectors, and the importance of clean marketing and transaction data for attribution and revenue modeling. It minimizes maintenance and accelerates time-to-insight which is critical for lean teams moving quickly.

2. Warehouse Layer

Tool Recommendation

BigQuery (Recommended)

- **Pros:** Serverless, minimal admin, cost-effective for variable workloads
- **Cons:** Poor query optimization can increase cost
- **Best For:** SMBs needing elasticity and simplicity

Snowflake

- **Pros:** High performance, granular control over compute
- **Cons:** Requires warehouse tuning to prevent cost sprawl
- **Best For:** Teams needing predictable performance with structured analytics teams

Redshift

- **Pros:** Strong AWS integration
- **Cons:** Less flexible scaling; more hands-on tuning
- **Best For:** AWS-native teams with engineering resources

Recommended Approach

- Use layered schemas: raw → staging → analytics
- Partition large tables by date
- Cluster commonly filtered fields (e.g., customer_id, sku)
- Apply cost controls (BigQuery budgets, Snowflake auto-suspend)
- Implement role-based access

Why We Recommend BigQuery

BigQuery requires almost no infrastructure management, scales automatically, and offers a predictable cost model for small-to-mid data volumes which is ideal for SMBs with lean teams. It supports rapid experimentation and marketing-heavy workloads without needing a dedicated data engineer to maintain it.

3. Transformation Layer

Tool Recommendation

dbt Cloud (Recommended)

- **Pros:** Easiest onboarding; built-in testing, documentation, and scheduling
- **Cons:** Licensing costs
- **Best For:** Teams wanting fast adoption and minimal engineering overhead

dbt Core (Free)

- **Pros:** Flexible, integrates with Airflow/Prefect
- **Cons:** Requires engineering setup
- **Best For:** Technical teams managing pipelines programmatically

Coalesce

- **Pros:** Visual ELT with collaborative modeling features
- **Cons:** Licensing required
- **Best For:** Teams wanting a visual metadata-driven modeling experience

Recommended Approach

- Build staging models to standardize naming
- Create core dimensions (customer, product, channel)
- Build fact tables (orders, sessions, subscriptions)
- Add dbt tests (unique, not_null, referential integrity)
- Document KPI logic for cross-team clarity

Why We Recommend dbt

dbt is the best fit for SMB e-commerce/SaaS businesses because it blends power and simplicity. It enables clear modeling of lifecycle and attribution metrics while enforcing testing and documentation which is critical given how quickly KPIs evolve. dbt allows lean teams to maintain a professional-grade transformation layer without complex engineering workflows.

4. Visualization Layer

Tool Recommendation

Metabase

- **Pros:** Simple, fast, low-cost
- **Cons:** Limited advanced modeling/visuals
- **Best For:** Early-stage teams needing fast insights

Looker Studio

- **Pros:** Free, intuitive, great for marketing dashboards
- **Cons:** Weak governance
- **Best For:** Marketing & growth teams

Power BI

- **Pros:** Strong modeling & governance, enterprise-ready
- **Cons:** Desktop-based authoring
- **Best For:** Ops-heavy orgs needing secure, structured reporting

Tableau

- **Pros:** Best visual quality and interactivity
- **Cons:** Higher licensing cost
- **Best For:** Data-rich organizations with dedicated analysts

Recommended Approach

- Build core dashboards: Marketing Performance, Revenue & AOV, Retention & Cohorts
- Include drilldowns for product and channel performance
- Set up alerts for anomalies e.g. CAC spikes, AOV dips, churn anomalies
- Create a fast-loading executive summary dashboard
- Maintain consistent visual design standards

Why We Recommend Metabase or Looker Studio

For most SMB e-commerce and SaaS teams, Metabase and Looker Studio offer the fastest path to insight with minimal setup. They meet the needs of lean teams, support quick iteration, and integrate naturally with marketing workflows. As complexity grows, teams can gradually introduce Power BI or Tableau without disrupting existing reporting flows.

2. SMB: Hospitality

What We Assume About Your Business

We assume you operate one or more hospitality properties (hotels, resorts, serviced apartments, or short-stay networks) with operational data spread across PMS, POS, booking portals, review platforms, and spreadsheets. Occupancy, ADR, RevPAR, cancellations, guest satisfaction, and staffing efficiency are central to your daily decision-making. However, reporting is often fragmented, inconsistent across properties, and heavily manual.

Factors Considered

The recommendations account for:

- Strong seasonality and demand variability

- Dependence on accurate operational and forecasting metrics (e.g front desk, housekeeping, etc)
 - Multiple data sources requiring consolidation
 - Multi-property structures needing consistent reporting
 - Mixed technical proficiency among hotel operations teams
-

BI Infrastructure Recommendation for SMB - Hospitality

1. Data Ingestion Layer

Tool Recommendation

Fivetran (Recommended)

- **Pros:** Reliable PMS/POS connectors, automated schema updates
- **Cons:** Pricing can escalate with many properties
- **Best For:** Hospitality businesses wanting low-maintenance, stable pipelines

Airbyte (Open-source alternative)

- **Pros:** Flexible connector creation, cost-effective
- **Cons:** Requires engineering oversight
- **Best For:** Teams with technical resources or custom PMS integrations

Flat-file or SFTP Pipelines

- **Pros:** Essential for legacy PMS/POS systems
- **Cons:** Requires ongoing monitoring and transformation rules
- **Best For:** Data sources without modern API access

Recommended Approach

- Connect PMS, POS, booking engines, and guest review feeds
- Map property IDs, room types, rate codes, and service categories

- Set frequent sync intervals for operational systems
- Use daily syncs for guest feedback and review platforms

Why We Recommend Fivetran

Fivetran minimizes operational burden which is critical in hospitality environments where staff rarely have the time or technical capacity to maintain pipelines. Its PMS/POS connectors and reliability make it ideal for hotels needing stable, automated data flows.

2. Warehouse Layer

Tool Recommendation

Snowflake (Recommended)

- **Pros:** Scales compute independently; ideal for seasonal demand spikes
- **Cons:** Requires cost monitoring via warehouse sizing
- **Best For:** Hospitality businesses with fluctuating volumes and multi-property needs

BigQuery

- **Pros:** Serverless, easy to maintain
- **Cons:** Costs can rise when analysts run unoptimized queries
- **Best For:** Teams using Google Cloud or wanting minimal maintenance

Recommended Approach

- Create property-level schemas and a consolidated global schema
- Partition booking tables by stay_date or check-in date
- Build SCD2 tables for inventory, pricing rules, and promotions
- Apply auto-suspend/auto-resume policies to manage cost

Why We Recommend Snowflake

Snowflake's flexible compute is ideal for hospitality, where demand varies significantly across seasons. You can scale compute up during peak seasons and scale down during off-peak periods, ensuring cost efficiency without compromising performance.

3. Transformation Layer

Tool Recommendation

dbt Core (Recommended)

- **Pros:** Free, scalable, strong testing/documentation
- **Cons:** Requires orchestration setup
- **Best For:** SMBs wanting high-quality modeling with low licensing costs

dbt Cloud

- **Pros:** All-in-one orchestration, easier for non-engineering teams
- **Cons:** Licensing cost
- **Best For:** Teams needing lower operational overhead

Coalesce

- **Pros:** Visual modeling, metadata-rich workflows
- **Cons:** Licensing required
- **Best For:** Cross-team collaboration, especially when hotel staff provide input

Recommended Approach

- Build unified guest profiles across PMS, booking, and POS systems
- Model fact tables for bookings, room nights, POS transactions, complaints
- Integrate event and weather data to enhance forecasting
- Add dbt tests for time anomalies, invalid rates, or missing property IDs

Why We Recommend dbt Core

dbt Core provides a powerful, low-cost foundation for modeling hospitality data. It handles the complexity of multi-property operations while keeping licensing simple which is ideal for SMB hotel groups.

4. Visualization Layer

Tool Recommendation

Power BI (Recommended)

- **Pros:** Row-level security, robust modeling, ideal for operational teams
- **Cons:** Requires some setup for shared workspaces
- **Best For:** Multi-property businesses needing structured access control

Tableau

- **Pros:** Rich visuals excellent for guest satisfaction insights
- **Cons:** Higher licensing cost
- **Best For:** Hotels with data analysts building high-touch dashboards

Recommended Approach

- Build occupancy, revenue, and ADR/RevPAR dashboards
- Create guest satisfaction heatmaps and service recovery metrics
- Add forecasting views based on bookings + events + weather

Why We Recommend Power BI

Power BI supports secure, role-based reporting for multi-property structures and enables operational teams to get fast, clear insights without complex interfaces.

3. Enterprise: Healthcare

What We Assume About Your Business

We assume you operate in a healthcare environment with data spread across EHRs (Electronic Health Records systems), scheduling systems, lab platforms, imaging, and billing or claims data. You need clear visibility into patient flow, provider schedules, and operational bottlenecks, along with insights into practitioners' capacity by comparing bookings to availability. You also require robust financial reporting, including revenue performance and budget vs. actuals across practices or specialties, all while handling PHI (Protected Health Information) safely and aligning with healthcare governance expectations.

Factors We Considered

Our recommendations account for the core realities of healthcare environments:

- PHI sensitivity and strict access-control needs
- Multiple legacy systems requiring careful integration
- Practitioners and administrators needing clear, intuitive dashboards
- The importance of accurate provider capacity and scheduling insights
- The need to track revenue and budget vs. actuals by practice or specialty
- Executive demand for reliable, real-time operational and quality metrics

Check out Kemb's [Data Strategy for Healthcare](#) which provides deeper sector-specific modernization frameworks and maturity considerations.

BI Infrastructure Recommendation for Healthcare

1. Data Ingestion Layer

Tool Recommendation

Fivetran Enterprise (Recommended)

- **Pros:** Encrypted pipelines, strong auditability, stable connectors
- **Cons:** Higher cost than the alternatives
- **Best For:** Healthcare systems needing secure, automated ingestion with minimal handling of PHI

Azure Data Factory

- **Pros:** Ideal for Microsoft-aligned EHR and operational systems
- **Cons:** Requires engineering setup
- **Best For:** Organizations already using Azure for clinical ops

Custom HL7 (Health Level Seven) or FHIR(Fast Healthcare Interoperability Resources) Pipelines

- **Pros:** Required for deep EHR/EMR interoperability
- **Cons:** Complex to build and maintain
- **Best For:** Large systems with mature engineering teams

Recommended Approach

- Securely ingest ADT, appointments, provider schedules, billing, and claims data
- Apply PHI masking/pseudonymization early in the pipeline
- Store immutable raw logs for auditability
- Validate timestamps, provider identifiers, and encounter types
- Fully encrypted, strong auditability

Why We Recommend Fivetran Enterprise

It provides the most reliable and secure ingestion path for healthcare environments with limited engineering bandwidth, ensuring safe handling of clinical and scheduling data while lowering operational risk.

2. Warehouse Layer

Tool Recommendation

Snowflake (Recommended)

- **Pros:** Advanced governance, secure data sharing, strong concurrency for clinical/ops workloads
- **Cons:** Requires cost monitoring
- **Best For:** Organizations balancing PHI protection with analytical flexibility

Azure Synapse

- **Pros:** Well-aligned with Microsoft-based healthcare ecosystems
- **Cons:** Steeper learning curve for non-Azure teams
- **Best For:** Health systems already integrated into Azure Stack

Recommended Approach

- Separate PHI and Non-PHI zones with strict role-based access
- Apply masking policies for clinician, financial, and patient-level data
- Partition by encounter date, appointment date, or service line
- Include metadata tags for sensitivity, specialty, and provider grouping

Why We Recommend Snowflake

Snowflake's governance tooling, masking rules, and secure compute make it ideal for blending clinical, operational, scheduling, and financial data especially for provider-utilization and budget-vs-actuals reporting.

3. Transformation Layer

Tool Recommendation

dbt Cloud (Recommended)

- **Pros:** Testing, documentation, and CI integrated
- **Cons:** Licensing cost
- **Best For:** Healthcare teams requiring governance and consistent transformation pipelines

dbt Core

- **Pros:** Free, engineering-friendly
- **Cons:** Requires orchestration
- **Best For:** Technical healthcare analytics teams

Recommended Approach

Build domain models that support both operational and financial decision-making:

- **Provider capacity models**
 - Join clinician schedules, appointment bookings, procedure blocks, cancellations, and overbook data
 - Model “scheduled vs. available vs. utilized hours”
- **Patient flow models**
 - Admissions, discharges, transfers (ADT)
 - ER wait times, triage-to-bed times, length of stay
- **Clinical operations models**
 - Labs, radiology, ancillary services
- **Financial performance models**
 - Revenue by provider, practice, specialty
 - **Budget vs. actuals** at department or location level
 - Encounter-level revenue attribution

- **Data quality tests**
 - Missing provider IDs
 - Invalid time windows (negative length of stay, overlapping appointments)
 - Orphaned encounters or missing department mappings

Why We Recommend dbt

dbt is ideal for healthcare data because it supports rigorous testing, clear documentation, and reproducible pipelines which is critical when modeling clinical schedules, provider utilization, patient flow, and revenue performance in a transparent, audit-friendly manner.

4. Visualization Layer

Tool Recommendation

Tableau (Recommended)

- **Pros:** Clinician-friendly visuals, strong for capacity and patient-flow dashboards
- **Cons:** Higher licensing cost
- **Best For:** Clinical and operational teams needing high interpretability

Power BI

- **Pros:** Strong governance, good for financial and administrative reporting
- **Cons:** Slightly more technical authoring
- **Best For:** Finance, scheduling, and operations leadership

Recommended Approach

- Build **provider capacity dashboards**: Scheduled vs. available hours, Overbook rates, Utilization by day, specialty, or location
- Build **booking vs. availability summaries** to help managers optimize scheduling
- Create **budget vs. actuals dashboards** for revenue performance filterable by practice, specialty, provider, and by service type
- Build operational dashboards that track ER throughput, ADT flows e.t.c.

Why We Recommend Tableau

Tableau excels at making complex operational data (provider schedules, procedure volumes, wait time bottlenecks) immediately understandable for clinicians and administrators. Its visual clarity accelerates decision-making in fast-paced healthcare environments.

4. Enterprise: Finance

What We Assume About Your Business

You operate in a finance environment with large volumes of sensitive transaction data, risk models, trading data, and regulatory reporting needs. Accuracy, auditability, and traceability are essential. You require real-time or near-real-time insights into exposure, liquidity, performance, and anomalies.

Factors We Considered

- High data sensitivity
 - Strict audit requirements
 - Complex ingestion workflows
 - Multiple business units needing controlled access
 - Demand for near real-time visibility
-

BI Infrastructure Recommendation for Finance

1. Data Ingestion Layer

Tool Recommendation

Airflow (Recommended)

- **Pros:** Highly flexible scheduling; auditable; integrates with APIs/SFTP
- **Cons:** Requires engineering expertise
- **Best For:** Finance teams needing granular control over ingestion

Custom ETL Pipelines

- **Pros:** Highly tailored to internal systems
- **Cons:** Expensive to maintain
- **Best For:** Institutions with mature engineering teams

Recommended Approach

- Build DAGs for trade, transaction, and pricing feeds
- Add reconciliation logic between source and warehouse
- Maintain immutable raw snapshots
- Encrypt sensitive fields

Why We Recommend Airflow

Airflow's audibility and flexibility make it ideal for finance environments where control, traceability, and customization are critical.

2. Warehouse Layer

Tool Recommendation

Snowflake (Recommended)

- **Pros:** Multi-region failover, strong governance, excellent performance
- **Cons:** Warehouse tuning required

- **Best For:** High-volume finance organizations with strict reliability needs

BigQuery

- **Pros:** Real-time capabilities, easy scaling
- **Cons:** Cost can spike with frequent queries
- **Best For:** Real-time risk or market-data-driven teams

Recommended Approach

- Create risk, treasury, compliance, and performance schemas
- Partition by trade_date, settlement_date, or account_id
- Implement RBAC and OLS/RLS
- Enable failover replication

Why We Recommend Snowflake

Finance teams benefit from Snowflake's governance and resiliency features (especially multi-region replication and granular security) ensuring high availability and compliance alignment.

3. Transformation Layer

Tool Recommendation

dbt Cloud (Recommended)

- **Pros:** Strong testing, documentation, CI/CD workflows
- **Cons:** Licensing
- **Best For:** Finance teams needing high auditability

Recommended Approach

- Develop P&L attribution models
- Build exposure and liquidity ratio models
- Apply schema snapshots to detect drift
- Add constraints, tests, and documentation

Why We Recommend dbt Cloud

dbt Cloud's testing and documentation capabilities support auditability, a must-have for financial reporting environments

4. Visualization Layer

Tool Recommendation

Power BI (Recommended)

- **Pros:** Strong security and governance; great for regulated data
- **Cons:** Desktop-based authoring
- **Best For:** Finance orgs requiring strict access control

Tableau

- **Pros:** Rich dashboards, strong interactivity
- **Cons:** Higher cost
- **Best For:** Portfolio analytics and what-if modeling

Recommended Approach

- Build real-time risk dashboards
- Add reconciliation dashboards for operations
- Create regulatory reporting templates
- Add KPI alerts for liquidity, VaR, or exposure shifts

Why We Recommend Power BI

Power BI's security model is ideal for financial institutions, providing row-level, object-level, and workspace-level controls that support strict data governance requirements.

Why Work With Us

Modern reporting is not just a technical challenge, it's an organizational one. It requires the right architecture, the right workflows, and the right level of adoption to turn data into real business outcomes. KEMB brings a rare combination of **strategic clarity, technical depth, and hands-on operational experience** across digital transformation, growth analytics, and business intelligence.

Our team has helped organizations transition from fragmented data and inconsistent reporting to systems that power daily decision-making. We understand the realities of lean teams, rapidly evolving tech stacks, and complex stakeholder needs. Whether your goal is to improve marketing performance, streamline operational reporting, forecast demand more accurately, or modernize your BI infrastructure, our expertise helps you get there faster, and avoid costly missteps along the way.

What differentiates us is our ability to combine **business strategy, data engineering patterns, and UX-driven reporting** into a cohesive, sustainable system. We don't just connect tools; we help you define the KPIs that matter, build trust in your data, and establish a reporting ecosystem that adapts to your business as it grows.

From E-commerce to SaaS, Hospitality, Healthcare, and Finance, our consulting and implementation experience ensures we can meet your organization where it is today, while preparing it for where it needs to be tomorrow.

Next Steps

Every organization is at a different stage in its reporting journey. Some need help defining foundational KPIs. Others need architecture redesign, warehouse modernization, or better attribution modeling. Some are ready to scale their BI function but lack internal capacity or processes. Whatever your starting point, we can help.

Our next step together is simple:

We offer a focused free consultation to assess your current reporting maturity, understand your goals, and map the most efficient path forward.

This session combines elements of our **BI Framework Assessment**, our digital transformation methodology, and our experience working across high-growth teams.

Following the session, we provide a clear, actionable plan that may include:

- Architecture recommendations tailored to your tools and growth stage
- Opportunities for automation and cost optimization
- A roadmap for KPI standardization and governance
- Reporting improvements for marketing, product, operations, or finance
- A plan for sustainable, scalable BI adoption

Whether you want a partner to implement the full solution or simply need guidance on the next steps, we can support you with the depth and flexibility your organization requires. [Contact us for a free consultation call.](#)