



Three Crucial Phases That Lead to a Successful BI Investment

Discover how to harness, consume, and swiftly act upon data to develop your competitive advantage

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Introduction

To stay competitive in today's business world, companies need to develop a strong "data culture"—an environment where employees are empowered to harness data to make better decisions.

A lack of data is hardly ever the challenge. Companies are swimming in data, and more is being produced every minute. The challenge lies in harnessing, consuming, and swiftly acting upon the data to achieve a competitive advantage.

To be successful, a strong foundation upon which to build a BI strategy is key. The right foundation leads to successful end user adoption, long-term scalability, and, ultimately, organization-wide BI maturity.

When developing and implementing a BI strategy, there are numerous factors to take into consideration from infrastructure, to business processes and user needs, to reporting requirements, and ongoing maintenance.

In this paper, the BI journey is broken down into three major phases. Within each phase, the required steps can be broken down into manageable tasks to ensure small wins are achieved. Each win will build off of the last, helping your organization grow in its BI maturity as your data culture adapts and grows.

Following the proven phases outlined in this paper will ensure your BI investment leads to success.

Phase One:

Infrastructure, Data Sources, and Knowledge Distribution

To initiate and sustain a healthy data culture, it is important to understand the time and investment required to develop an effective BI strategy. Real-time visibility that drives change does not happen overnight, it's a process.

There are multiple phases of the BI journey, and each phase must be completed thoroughly in order to create a solid BI foundation. Remember to take the journey one phase at a time. Undertaking a BI implementation in one fell swoop creates significant room for error.

A solid footing for future phases is created by breaking the implementation down into manageable steps.

During phase one, develop an infrastructure strategy, understand business processes and workflows, identify critical data sources, and distribute knowledge to key stakeholders.

Identify Infrastructure Needs to Build a Strategy That Lasts

Understanding your options and developing an infrastructure plan that can scale is a vital first step.

Some initial decisions will need to be made about hardware and infrastructure. Before determining needs, first brainstorm what the solution should accomplish. Start by asking these questions:

- Is a cloud or on-premise solution required?
- How much data do you have? What kind of data do you have? How many data sources?
- How are you going to connect the data? Where is the data currently stored?
- Where are you going to put the data? Who will protect it?
- How do you want to distribute the data?
- Does your BI strategy require a data warehouse? Do you have one or will you need to build one?
- What size database and servers will you need for optimal performance and scalability?
- How many users are there? What users will benefit from the BI solution?
- Do you want to enable a self-service strategy for data consumption?
- How will data governance work?
- Do you want to provide portal or mobile access to your users, customers, or vendors?
- Does the cloud service provider have restrictions or limitations on accessing your data?
- What happens if you do nothing?

Many BI projects fail mid-stream due to performance issues—either backend performance is too slow and the data refresh is not timely, or the front-end user experience is too slow and painful. In both scenarios, users fail to adopt the BI solution. Spending time ensuring the infrastructure is properly established to meet the end user needs will create a solution that lasts.

Once infrastructure needs have been identified and a strategy has been developed, remember to keep in mind the fact that data will be continuously added to the BI system. Scaling the hardware to adequately manage the data should remain a top priority.

Understanding Business Processes and Workflows

After determining the right infrastructure strategy, the next step in the BI journey is to understand business processes and workflows.

In this step, determine:

- **who** needs what;
- **what** they specifically need;
- **where** is it located; and
- **when** they need it.

While this step may seem obvious, it is often a stumbling block. A critical factor of success is getting the right data to the right people in time. Empowering end users to make timely, data-driven decisions hinges on this step.

Identify Critical Data Sources

Identifying and connecting the correct data sources at the outset of the BI project, as well as identifying the data sources needed in the future, is the next crucial step during phase one.

Identification of the appropriate data sources dictates if there is a need to build out a data repository—a data warehouse or data lake.

For instance, if you are planning to connect to multiple internal data sources and are mostly reporting on lagging indicators, the need for a data warehouse is not pressing. Most BI tools on the market make the process of connecting small amounts of data for dashboards and reports a fairly simple task.

Large datasets—such as data from an ERP system combined with CRM data and data from external sources—need to be housed in a data warehouse for ease of use. The build and ongoing maintenance of a data warehouse requires specific database and developmental talent. Additionally, it necessitates a more significant investment in the project. When implemented correctly, the upfront investment and additional work will create a single version of the truth to report from as well as a better vision by joining multiple data sources in reports and dashboards.

Before moving onto the next step in phase one, be sure to clearly articulate whether there is a need for a data warehouse based on the critical data sources that will be utilized.

Distribute a Single Version of Truth to Key Stakeholders

Collaboration throughout the organization is more easily attainable with a data warehouse approach. Sharing dashboards and reports through web or mobile platforms allows users to distribute a “one world view” of the data.

Whether the BI project requires the implementation of a data warehouse or not, the distribution of dashboards and reports make data easily consumable to end users and is a solid foundation for creating a strong data culture.

Phase Two:

The Power User, the Consumer, and Connecting Additional Data Sources

Phase two of the BI journey is about empowering business users and connecting any remaining critical data sources.

During phase one, you may have imported sales and finance data from your ERP system into your BI solution to provide dashboards and reports to the executive team. Now it is time to bring in the rest of the ERP, CRM, and real-time price-index data required to manufacture your products. It is also time to expand the BI solution to include mid-level managers, business users, and key vendors.

The completion of phase one built the proper foundation upon which to develop these new features. As phase two of the BI journey begins, consider these questions:

- What are the remaining internal data sources to connect to?
- What are the critical external data sources to connect to?
- Should you have dedicated users (Power Users) build out reports and dashboards?
- Who are the pure consumers of data that the BI solution should reach?
- Are there partners or vendors that should be utilized?
- Are there distribution processes that can be automated to enable users to subscribe to dashboards?
- Are there ways to become more proactive with changes to your data? Can you establish alerts?
- Can you create a report with slowly changing dimensions?

Given that departments and resources both need to view reports and dashboards for varying reasons, there is no one-size-fits-all dashboard.

Data will need to be customized to meet the needs of the user who is interpreting and acting on the data. A sales manager needs to see numbers differently than a finance or operations resource. As such, a resource in operations shouldn't be responsible for creating sales or finance dashboards.



The first step is to identify personas within each department of the organization.

Next, have a local Power User create customized reports and dashboards. It is important to identify Power Users at varying levels of each department (e.g., department head, senior manager, manager). By empowering resources to generate reports for local consumers, meaningful reports and dashboards tailored to meet specific needs will be created—ensuring business users are receiving actionable insights upon which to make better decisions.

Taking the time to complete these critical steps in phase two will allow deeper insight into the data while enabling complete user adoption of the BI solution.

Phase Three:

Leverage External Data and Big Data to Shape Corporate Strategies

A BI journey has reached maturity when the solution can combine any external data source with the data model in the data warehouse. In phase three, leveraging data becomes a competitive advantage.

Big Data platforms—such as Hadoop, Mongo, or Hortonworks—allow insight into:

- customer behavior and brand sentiment;
- buying cycles within certain demographics;
- market segment forecasts; and
- demand fluctuation within regions or territories.

Creating actionable insight into these types of data sources can assist corporate strategists by allowing time to pivot, stay ahead, or catch up to competitors. At this stage of the BI journey, it is possible to interpret data in a way that allows for more strategic decision making—one that ultimately shapes corporate strategy.

Some questions and considerations to take into account at this stage include:

- What Big Data platform(s) are geared to my industry?
- Am I able to efficiently add new reporting sources to my data warehouse post merger or acquisition?
- How can I collect and leverage sensor data from my equipment and machines?
- How can I better support sharing appropriate data with vendors and suppliers?
- How can I introduce a self-service reporting strategy with my customers?
- How can I accelerate my R&D efforts with the use of BI and AI?
- Should hiring a data scientist be considered to assist with Big Data and advanced algorithms?
- What are the competitive disadvantages to not maturing my BI solution?
- How quickly can I react and pivot my market strategies due to sudden business changes?
- What is the ultimate cost of not maturing my data culture?



In industries such as manufacturing, leveraging artificial intelligence and machine learning for proactive change management and predictive strategic planning is increasingly common. Utilizing augmented analytics and the use of advanced algorithms in predictive analysis signifies maturity in an organization's data culture.

Conclusion: The Ever-Evolving BI Journey

No matter what phase of the BI journey your organization falls into, there is always room to expand your solution. BI, and the data culture it feeds, is a constantly evolving model that should adapt with your organization.

Having a third party periodically assess your BI strategy will help ensure it is functioning optimally. A BI health check or assessment is especially valuable after a period of growth or if you've recently expanded your reportable data sources. A health check helps identify gaps in the data model or reporting requirements.

No matter where you are in your BI journey, third party expertise can help you maximize your BI investment through services such as:

- BI Roadmap and Strategy
- Software Selection and Evaluation
- Technical BI Systems Health Check and Assessment
- Business Process and Reporting Assessments
- Data Warehouse Revamp or Redesign
- Data Warehouse Design and Build
- Dashboard Creation and Deployment
- Integration of New Data Sources
- End User Technology Training
- BI and Reporting On-Demand

As technology evolves, there are increased capabilities that are introduced that might assist with your BI efforts. Staying up-to-date with what is available is important.

No failed BI project is immune from resuscitation. There is inevitably always a path to put your BI project back on course and expand your organization's data culture.



How enVista Can Help

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