

Guide to Modern BI Evaluations



Executive Summary

The Business Intelligence (BI) and analytics platform market is crowded and constantly evolving, making it difficult for organizations to keep pace and take full advantage of innovative modern technology. Today's buyers are faced with the difficult task of sifting through a complex and diverse array of BI and analytics products, and deciding on the best fit for their organization with little guidance on what to look for and what exactly to base the decision on. This guide is intended to help companies through this challenging process using a modern evaluation methodology and selection process to make an informed BI platform purchase decision.

Digital transformation has forever changed the face of business and disrupted the status quo in virtually every industry. Restaurants are embracing fully online reservation systems and cashless transactions. Brick and mortar retail brands are navigating a long-predicted pivot to true omnichannel commerce. And born-digital businesses like Amazon, Square, and Zoom are reporting record growth. Although this new wave of digital transformation was accelerated by the global pandemic, it's being fueled by a massive wave of customer data. To keep their heads above the crest of this wave, businesses are turning to BI platforms and tools to improve their ability to understand and marshal this data as one of their most important assets.

This new paradigm raises new challenges for BI use. In the past, data analysis and visualization capabilities were siloed, with specialists serving as data gatekeepers. In the digital era, everyone across an organization needs access to data and insights relevant to them in order to get the job done. Because data access takes so many different forms and touches so many different audiences, selecting the right tool (or tools) is more important than ever. And yet, a 2019 Gartner study found that "80% of analytics insights will not deliver business outcomes." It's time for a different approach in the way we select analytics and BI solutions.

To make better BI decisions, evaluators need to focus on the value driven by BI and analytics tools and capabilities rather than merely costs and commodity capabilities. Since data paves the way for business operations' digital transformation, it's time to widen the lens on the benefits of tools to manipulate and analyze that data. If they can get this right, CIOs and CDOs will build a flexible foundation that can take future tectonic economic shifts in stride and become organizational champions who distinguish themselves as strategic thinkers able to shepherd technological change that aligns to the bottom line.

Identify the Business Need

Business problems

If you're reading this, you probably already know that the BI space has no shortage of options. What's more, you probably realize that many BI tools appear similar with minor differences in features, functionality, and perceived ease of use. But how do features and functionality align with your business problems and provide real value?

The first step to evaluating options should be an honest review and assessment of your current situation, by asking yourself these questions:

- What are the problems I'm trying to solve?
- What are the measurable outcomes I'm trying to achieve by fixing those problems?
- And finally, why do I need to solve these problems?

Time and again, we hear companies simply say they want to be "data driven," but many don't understand what this means, and even fewer know how to put this into practice.

Being data driven is not about pretty charts and graphs. Being data driven is about leveraging data proactively, not reactively, and using insights derived from it to drive action and inform decision making across the organization. It is about putting data into the hands of business users who have historically been left behind compared to their data analyst counterparts. Being data driven means using data as a competitive differentiator and value generator.

Sounds daunting right? Well, it doesn't have to be. A data problem worth solving should be tied back to one of three goals:

1. Reduce cost
2. Generate revenue
3. Mitigate risk

Here's a simple matrix of examples:

	Reduce Cost	Generate Revenue	Mitigate Risk
Business Teams	<p>SUNRUN</p> <p>Reduced data warehouse design time by 50% & Infrastructure building time by 60%</p> <p>Time Savings Efficiency Productivity</p>	<p>TUFT&NEEDLE</p> <p>Improved YoY Prime Day growth by 1,000% by monitoring targets & adjusting activities in real-time</p> <p>Increase Sales Reduce Churn Increase Upsell Inventory Management (Retail) New users (Gaming) Marketing Optimization</p>	<p>LANDBAY</p> <p>Decreased audit time by 81% via Increased efficiency in external processes</p> <p>Data Security Governance Fewer Audits</p>
Customers	<p>waterscan</p> <p>Creating a sustainable water future</p> <p>Cut report development time by 95% with self-service exploration for all employees</p> <p>Build vs Buy (and cost of maintaining solution)</p>	<p>harver</p> <p>Increased executive engagement by boosting adoption of new Insights offering</p> <p>Monetize New Product</p>	<p>FORCE THERAPEUTICS</p> <p>Identified spikes and anomalies in virtual care to improve quality and mitigate health risk</p> <p>User Permissioning Data Security Governance Competitive Risk</p>

Identify your audience

Once you have a good grasp on how modernizing will lead to measurable business outcomes, it's time to start considering the audience. In the traditional BI approach, business users were segregated from the data teams, which resulted in business users lacking self-service, and data teams struggling to keep up with ad-hoc information requests.

A modern BI tool should serve multiple audiences, bridging the gaps between the business teams and the data experts.

For example, consider a customer success manager who needs to understand the customer health score before hopping on a client call. It doesn't make sense to wait in a queue to get needed information, or to leave the applications they are working in to log into a separate BI tool to access the critical information needed to perform their job. To unlock the most value from your data, all departments should have near real-time access to data in the applications they are already using every day. Think about the efficiencies you gain if your teams automatically get data and can take action right from the applications they are already working in. That's taking it to the next level.

Frame the requirements

Once you develop a solid understanding of the business needs across your organization and the users who will be served by your solution, it is time to formulate requirements before engaging vendors. It is imperative that these requirements are expressed in business terms that clearly articulate the problems you are trying to solve, and the use cases you are looking to address. If you find yourself creating a list that is focused on technical capabilities and includes requirements such as "the tool should support GIS capabilities" or "the tool should support these specific

visualizations," you are not aligning the evaluation criteria to the real needs of the business. This process should not result in a long list of features in a RFP that you ask each vendor to complete so you can choose the one that checks the most number of boxes. If the BI platform you ultimately decide on doesn't solve problems for your users and improve business outcomes, the choice is the wrong one no matter how many features the product delivers.

Explore options

Discovery

After you've identified some viable options, it's time to explore them further. Set up some conversations with vendors to begin understanding how well their solution fits with your vision to transform your business through the smarter use of data. How tailored is this BI tool to your specific criteria, and how well does it align with your specific business problems? Before launching into product demos and sales pitches, vendors should take the time to truly understand your business objectives.

These conversations should be collaborative, with the main goal of determining if there is a mutual fit. These conversations should be centered around value. During the discovery phase, you may want to ask yourself:

- Does this vendor have a good understanding of how my business operates and my specific problems?
- Did the vendor give me a baseline understanding of how their solution will specifically solve those problems?
- Will this solution transform my approach to data and ultimately, my business?
- Can the vendor provide relevant customer examples/references from my industry?

Demos

Demos are an important way for you to differentiate tools and create a shortlist of options. As we said earlier, many tools are very similar at the surface and compete on features, so use the demo to focus on what each tool does differently and extrapolate how it will handle your use cases in production.

Here are some demo considerations:

- How well does this solution fit with my existing architecture? Will it still work if my architecture or data sources change?
- Does this tool scale to serve multiple audiences? What happens when my data or user base grows?
- Is this demo showing out-of-the-box capabilities or advanced features that require additional fees or heavy custom development?
- What will it take to set up and maintain this solution?

During the demo, we recommend you spend time understanding the architecture since this is most often how BI tools differ. Two major architectural differences include where your data is stored and where the data logic lives. Additional questions you should ask:

- What can you do with the data beyond general reporting and visualizations?
- Can you send data to other applications?
- Can you automate processes using data?
- Can you build custom applications that help your users and customers solve specific business problems?

Cost Structure

Another important aspect to drill into at this stage is around the pricing mechanics and levers that various BI vendors use to charge customers. Each pricing model has pros and cons and can significantly impact your overall ownership cost depending on the expected usage patterns for your organization. A detailed cost benefit analysis should come later after you have a full understanding of the value each solution can offer, but in this stage you should establish a basic understanding of how each BI vendor charges for the use of their software. Some common examples include:

- **Named-user** – per user/per month monthly subscription cost, and typically offered as user tiers based on functionality delivered.
- **Core-based** – licensed based on server capacity and often positioned as “unlimited” users by vendors. This is theoretical, as additional cores will need to be purchased as user volume and workloads increase.
- **Data volume-based** – pricing model determined by the amount of data stored within in-memory extracts or in the underlying database.
- **Metered consumption** – “pay-as-you-go” model where cost is based on some measure of usage (e.g. number of queries, page renders, active minutes, etc.).

Last, you may want to use the demo as a chance to learn about the support a vendor will provide during the remainder of the evaluation and through implementation. A vendor should be a partner and a project assistant, providing clear next steps, but flexible enough to align with your timeline and expectations too.

Design the evaluation

Any researcher will tell you that upfront design is the most important part of an experiment. The same holds true for evaluations. The first step in designing an effective evaluation is to revisit your vision and business value. Specifically, now that you've articulated the gap between current state and future desired state, and explored vendor options and features, you need to answer the question: What outstanding questions need to be answered to make your vision real?

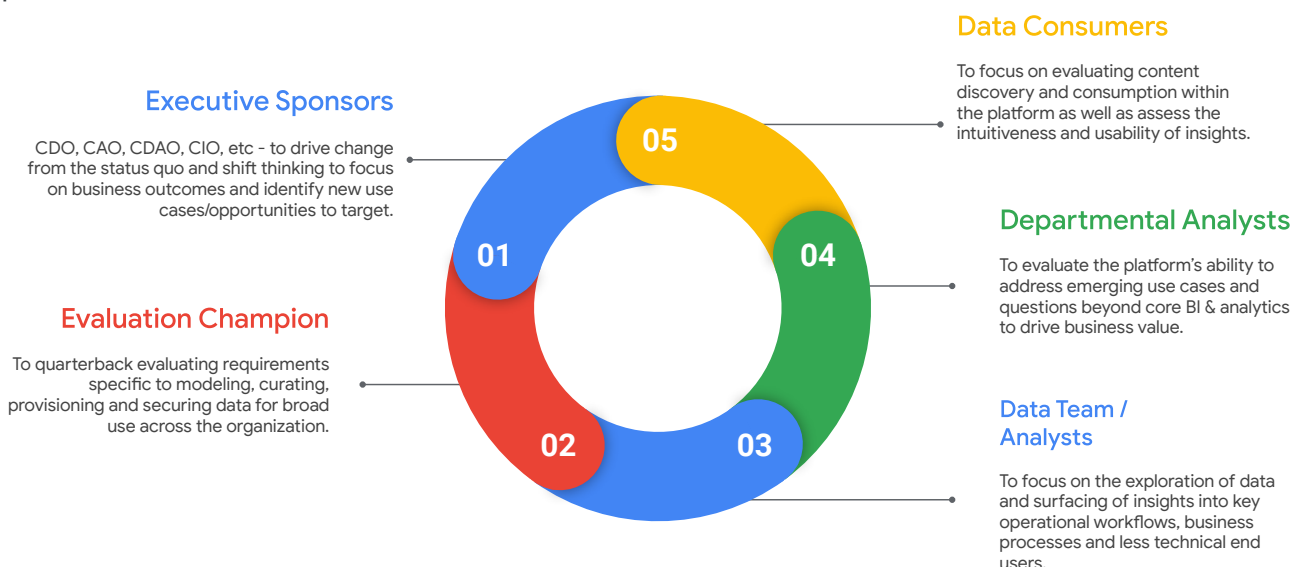
The next step is to consider your decision criteria – the key dimensions you plan to rank your options on. These should ideally tie directly back to your business value and key capabilities. But, what do good criteria look like? Let's start with an example of bad (but surprisingly common) decision criteria: price and ease of use. Why don't these work? With regard to price, in the explore options phase, hopefully you saw that different BI tools will provide completely different options catered to everyone from seasoned software developers to completely non-technical business users. If BI is really a priority, first spend the time understanding the value created by a tool, then work on negotiating the right price. When it comes to ease of use, the natural question is "to whom and for what?" Treating all user groups' needs as monolithic invariably makes for a bad experience for all of them.

Instead of focusing on price and ease of use, here are a few sample criteria we recommend building into your evaluation:

- **Flexibility** – how flexible is the approach to accommodate more complex analyses beyond your first-use case? How well can it adapt to a changing technology landscape so you don't find yourself "modernizing" all over again in 5 years?
- **Extensibility** – does the tool play nice with other tools of your trade?
- **Long-term manageability** – how does the tool scale? How difficult will it be for data teams to manage it at scale? How will performance and cost be impacted with maturity and more users?

Evaluation team

Once you have some solid criteria to evaluate options, the next step is to assemble your team. In the past, BI evaluations were the solitary domain of IT organizations. Today, because nearly every role needs data to be successful, evaluations demand involvement from several broad groups of stakeholders. The visual below represents an overview of who should be involved in your evaluation and what they should be responsible for:



Process and timeline

Last, but not least, it's time to plan the timeline and process of your evaluation. Again, it's helpful to start with a common misconception about what a successful evaluation should look like. Consider the following late 90s/early 00s era myth:

"BI evaluations require 3+ months and at least 50% allocated resources. You're going to have to muddle through yourself with little or no support from the vendor besides arcane online docs. As such, evaluations should primarily be owned by IT, and you should run an RFI to narrow the field as much as possible first."

In fact, evaluations can follow whatever process you need and in practice can range from single-week workshop evaluations to 6-month development-heavy marathons that span multiple business units and tens of stakeholders. While the exact timeline and requirements differ, we've identified some rough phases all good evaluations follow:



As you go through this design process, don't forget that BI vendors run evaluations every day. Your vendors should be able to coach you on how best to structure an evaluation, who to involve, and when. Just be sure to sanity check their suggestions to ensure you're getting the time you need to be confident in your decision.

Execute the evaluation

At this point, you have a short list, an evaluation plan, a team, and — most importantly — a vision for where a modern approach to BI can take your organization and what specific business value that transformation will create. The hard part is done, but there are a few things your evaluation team should address with undivided focus during the evaluation.

First and most obvious, keep in mind the fit of the tool for the current state architecture/use case, but avoid only evaluating the deliverables, dashboards, or artifacts produced.

- Focus on the process — what will it take to get what you want? And, how hard will it be to maintain and grow that footprint?
- Understand the distinctions between POC and production — pick a high-value use case that will allow you to extrapolate to your most difficult analytics problems, tabling questions about implementation details for when you select the tool of choice.

Move beyond dashboards

One less obvious area of focus is the tool's flexibility to adapt to future use cases. This can feel ambiguous and subjective at first, but becomes significantly easier if we break down the broad term “flexibility” into three critical buckets:

- “Engineering” extensibility — utility of APIs, SDKs and other best practice tools for building additional functionality
- “Analyst” extensibility — ability to incorporate bespoke visuals, new data types, or new analytical patterns
- “End user” extensibility — ability to customize the user experience to meet end users at their sophistication level

As a catch all, be sure to explore whether the BI platform in question offers access to developer tools and an open source community. Marketplace-based approaches are a great way to ensure that the core capabilities of the platform are extensible and flexible enough to future-proof your purchase. Just be sure that the marketplace in question is truly core to the platform's business and that the vendor is serious about long-term promotion and investment.

Last, but not least, compare and contrast with what your vendor talked about in the demo. Keep an eye out for which platform features or add-ons are included in the standard package, and which ones will only be available at extra cost. The bulk of your evaluation should focus on the depth, usability, and scalability of core features for your use case, with special attention to the real, architectural distinctions behind apparently common features. For example, many BI tools offer “live connection to a database” but not all live connections are created equally. Be sure the core mechanics work well, and then double-check that any extended toolkits are extensively documented and used by customers today.

Vendor red flags: a miscellaneous checklist

- Rushing the evaluation process
- Presenting a highly manual or unscalable solution to your use case
- Low level of support provided (engagement in the trial usually predicts what level of support you'll have access to post-implementation)
- Low quality or low availability of documentation/training materials
- Over-reliance on pay-to-play features that are not included in the core platform or not supported for your specific architecture

Decide on the tool of choice

After running one or more proofs of concept (POC), ideally you're honing in on a winner. Picking the technical choice is a huge step. At this point, turn your focus on finalizing the licensing details and rollout plan.

In terms of arriving at a final decision and signoff, every organization will have different processes that they follow. However, based on the key roles identified earlier, it is recommended that the evaluation champion be held accountable for gathering input from the broader evaluation team and driving the team to a decision that is presented to the executive sponsor(s) for final approval.

Commercial alignment

Software license cost is only one component of the total cost of ownership (TCO) of a BI platform. Other significant costs that should be considered are FTEs, storage/compute, and consulting services. TCO is certainly an important factor, but now is also the time to revisit value. BI tools are not commodities; they do not all deliver the same value. If they did, why would you do an evaluation to begin with?

Time and again, companies go through long vendor evaluations and ultimately make the final decision on software license cost alone. Why spend weeks evaluating a BI tool, only to differentiate them based on price and then choose the least expensive option? You could have saved yourself a lot of time up front if price was your only consideration.

Earlier we talked about value in terms of increasing revenues, decreasing costs and reducing risks. Consider the total value, as this is what should be driving your decision. Reflect on the POC you ran and how this tool will transform the way your business works with data.

The first step to commercial alignment is understanding the vendor's licensing model. Some may charge a flat fee, some may charge for data storage, some may charge based on users. Further, it's critical to understand how this pricing changes as your business evolves (and grows).

Another important consideration are potentially hidden or additional costs beyond the cost of the software itself to arrive at a total cost of ownership across the products being considered:

- Can you support this tool (and any required infrastructure) with current headcount and skill-sets, or will you have to hire a specialist?
- What would it cost to switch out part or all of this solution and switch to another vendor?
- Are data storage or server fees included?

Enablement and support

Depending on the stats you look at, we often hear that somewhere between 60-80% of IT projects fail. The first few weeks of implementation can make or break the success of your BI project. The vendor should take this very seriously and provide prescriptive and tailored enablement and support to ensure your success.

Consider again the skillset and team you have internally and what additional services the vendor offers. Some vendors will have internal professional services (PS) organizations, or an ecosystem of preferred software integration (SI) partners, or some combination of both. Whichever option you choose, be sure you are openly communicating.

Pro-tip

Make sure the vendor has a strong internal PS team, or trusted SI partners, that have experience in your vertical, region, or existing legacy system. This experience will go a long way in ensuring the success of your implementation.

The implementation phase is perhaps the time when you need the most support. During this time, look to the vendor as a trusted partner to help guide you through the process. PS teams and SI partners have years of experience in successful BI implementations, so lean on them to build a realistic project plan, with clear timelines and deliverables, and look out for potential hurdles.

A key component to a successful implementation is prioritization. It's critical to stay focused on the immediate use-cases that will provide the most value. Avoid the temptation of broadening the scope to a point where it's unmanageable. Together with the vendor, map out smaller, achievable sprints that will deliver results and put your team on a path to being self-sufficient.

Here are some of the phases you might see during implementation:

- Building out the data architecture and business logic with technical teams
- Gathering requirements from business teams
- Generating an initial set of reports and dashboards

- Introducing and training business teams
- Identifying future use cases and mapping
- Setting up a framework for ongoing enablement and support

As you wrap up the engagement with the services organization, assign an internal sponsor to maintain a relationship with the vendor or SI partner. By the end of the engagement, you should feel confident and capable of owning the solution internally; however, it's good to keep an open line of communication.

Conclusion

Most CIOs and CDOs consider BI and analytics one of their top strategic initiatives as they look for new ways to realize the full potential of their organization's data, and fend off the intensifying threat of disruption. Because of the strategic importance of BI, the process of evaluating modern platform options warrants careful planning and thoughtful execution given the value that can be unlocked by choosing the best platform for the unique needs of your organization. The framework outlined in this guide is designed to help you hold every BI platform vendor you are considering to a high and consistent standard during the evaluation process, and make the most informed choice for your organization.