7 Criteria to Consider When Embedding BI

A practical guide for organizations considering whether to "build or buy"

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You've worked hard to develop an application that addresses your customers' business challenges, and you should be proud of the value it offers them. But your competition has rolled out whiz-bang new visual analytics with shiny dials and colors. There may or may not be deep value beneath their glimmering, new features—there may be nothing wrong with your application—yet you've heard reports from your salespeople that they're struggling to win deals because there is so much perceived value wrapped into these analytics features you're not offering. Now you have an opportunity to close the gap and expand the value of your application.

Your decision to add new visual analytics, dashboards, and reporting is simple compared to your next decision: buy or build? Technology-driven organizations face this choice all the time. Of course, and there are traditional criteria; however, there's nothing traditional about embedding visual analytics and business intelligence. This is a fast-evolving discipline with high stakes. Done well, visual analytics help your customers start productive conversations based on the solution you supply. Done poorly, visual displays reflect badly on your company and suggest an inability to keep up.

Choosing to build or buy a modern embedded analytics solution involves many considerations and rarely offers a simple answer. This paper will help you understand and evaluate the criteria that can guide you to making a well-informed decision that best suits your offering and organization.

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1.

Provide compelling visual analytics that drive value

Imagine the big moment when you've released a new version of your solution, and all the wrapping falls away. One by one, your customers open your application and see their data light up in new ways. How do they feel about what they see, and what do they think?

You want them to see new value in your product through these beautiful analytics. Fairly or not, people tend to judge data by its display. But unless the analytics you deliver are as effective and easy to use as they are impressive to look at, the initial judgment fades, and so does your image as a leader in your space.

While the right display is a truly potent tool, a competent analytics solution is far more than just a report writer or chart builder. It's based on proven principles of cognitive psychology and usability—simple enough to let data tell its story without interference, while flexible enough to answer any question on the fly.

A company behind such a strong analytics solution has spent years developing their applications—from advanced capabilities to intuitive interfaces to extensibility through integrations. Do you know all the nuanced ways in which your customers can use data to answer their questions? What will it take for you to provide and support that functionality and flexibility?

As time goes on, customers will have new questions, new use cases, and new ways to coax greater value from their data. Whether driven by customer feedback, competitive research, market trends, or new features within your core application, customers will expect your analytical capabilities evolve alongside your product. For an in-house team faced with revisions, it will feel like just yesterday that the wrapping fell off their analytics display. Now they must go back to work for adjustments or an overhaul—instead of advancing your core application.

It takes a nimble, extensible application to adapt fast enough to flow with evolving customer demands; if your analytics offering grows old and inadequate, the power of your application can go unseen. Insights and value that you could have delivered get left behind as missed opportunities. Will you have the resources and flexibility to respond to changing customer needs, or will you let your analytics take the back seat instead? Faced with this challenge, maturity in specialization often wins the race for innovation.

2.

Get your analytics solution to market quickly

When deciding whether to build or buy, one obvious criteria is speed to develop and deploy. Delays to market become gifts to your competitors and frustration for your customers. When considering in-house development, your inevitable question will be: "Is it worth the wait?"

One of the most widely believed fallacies is that analytical dashboards and reports can be knocked off quickly. Designing, building, and implementing user-friendly embedded analytics, data visualization, dashboards and BI solutions is deceptively difficult. Few companies have access to in-house engineers that know visual analytics.

Teams without deep expertise in BI and visual analytics often invent as they go, creating unplanned expenses and delays as they navigate misunderstood specifications, evolving requirements, coding compromises, long emails and meetings, iterations of prototypes, and ultimately a minimum viable product that's far from the original goal.

The speediest option is almost always to partner with a specialized provider—one whose people live and breathe the rapidly advancing field of analytics and data visualization.

3.

Deploy and scale with ease

Is deployment easy? Or, like the birthday present marked "assembly required" just under the wrapping, does post-purchase data alignment and display design make implementation a nightmare?

Just connecting to data can be a challenge. You'll need a solution that can draw from just about any database of any size or variety. An application that came to life in-house can be shot down by real-world data. How many customers will happily beta test your offering for you?

Purchased solutions can have their own problems, of course. If you buy, make sure the solution aligns with the goals for your organization's broader data strategy. You may save trouble and extra costs if you can avoid rehosting, data movement, remaking data structures, star schemas, and special analytic databases.

Make sure that the solution integrates easily with your infrastructure— whether that means deploying on-premises or in the public cloud, on Windows, Mac, or Linux. Consider what's required to deploy your solution as

ready-to-run. Think about what will be required to monitor its usage, and to scale your solution as usage increases. It should be simple, flexible, and adaptable; why limit yourself or your customers?

4.
Leverage your company's domain expertise

You shop for food in a grocery store, have your car fixed by a mechanic, and get your hair cut by a stylist. In the modern world, every business has its own collection of specialties. If you must have the best, you go to a specialist with up-to-date knowledge and reasonable prices. Isn't that why your customers come to you?

Imagine that your unique value is in software that manages accounting transactions and financial data. Its development isn't a simple matter—far from it, given that your staff has worked in this particular area of software development with intense focus every day for years. Then one day you want them to write an expert, integrated business intelligence and data visualization application. Is that realistic?

Your greater value in this case comes from other staff who face your customers. They can vividly imagine the displays of data that your customers would find most useful, and they're eager to create them. These staff are the ones who know your customers, know how they use the data you provide, and understand your customers' challenges. They can help create the right analytical displays without the need to master a complex back end as the foundation to your analytics solution.

This is how your company's unique expertise can really show itself as you empower your customers to make better, data-driven decisions with your application. Let your customer-facing staff focus on what they know best and your software engineers can concentrate on improving your core offering.

5.
Integrate analytics into your customers' workflows

Regardless of your decision to build or buy, your solution should let your customer work the way they want to. It should enable smooth, seamless processes without getting in the way of the end users' workflows. This means single sign-on capabilities to provide them a seamless experience without another login, a functioning integration without awkward interactions with the core application, and a continuation of your branding to keep a consistent look and feel.

A mature solution is transparent. It lays on top of the core application as if it belongs there. It starts to work when an engineer drops a single URL into the code—the way someone embeds a YouTube video into a blog. From there, the analytics application easily passes directives back and forth with the host. Your customers should never deal with APIs or SDKs.

When it comes time for users to share their work, the analytics solution also shows its integration value through easy access to whatever popular formats customers may need. This should include PDF, web browsers, PowerPoint, and simply JPEGs, ready to copy and paste.

The most effective way to empower your users with embedded analytics—from accessing and exploring their data to sharing insights—is to keep them in the flow of their work. Satisfaction occurs when software gets out of the way their stream of questions and simply lets the data answer.

6.
Provide out-of-the-box data access and compatibility

Few frustrations are more wasteful for support staff and more painful for end users than not being able to read and analyze data immediately. To prevent interruptions to their work, end users should be able to explore the data right away.

The pain endures even when data transformation is part of the routine, such as when you refresh data marts. Inevitably, there's a gap; the process creates differences between the live transaction records and the transformed data. One user asks another, "It says X over here and Y over there. Which is correct?" Discrepancies and inaccuracies can prompt confusion, pain, and blame—not to mention the impact to their business.

It makes more sense that the embedded analytics solution reads your application's data natively—no transformation, no proprietary formatting, and no delay. Data read natively can be used instantly for up-to-the-minute analysis of business transactions. Analytical solutions that read any data as is lets users get on with their work, which is all they really want to do.

7.
Weigh financial commitments against benefits

Running underneath most of these criteria has been a common decision: where to invest for the most return? There are several factors. First, you must figure the costs, direct and indirect, over the lifecycle of the offering—typically seven or eight years.

In-house development has opportunity cost for your customer-facing experts: They must imagine and describe in detail a kind of solution they don't know well. Worse, they must re-imagine and re-describe each time the engineers finish an iteration and offer new tradeoffs or require new compromises. In comparison, a well-designed, mature data and analytics application turns the ordeal of remote-control development into a flow of hands-on expertise. The new analytics displays then come from the full depth of your staff's expertise.

A similar equation works for your software developers. When your customer-facing experts design their own visualizations, engineers are again free to do what they do best. During development, you have another opportunity cost in the time to deploy. Your competition's whiz-bang display continues to show up, so your salespeople assure prospects about your big new improvement, hoping they wait to see it. But how many will actually wait?

Roll-out only begins the next phase of costs. Nothing ever stays the same, especially when technology is concerned. The shape of your data may change, the needs of your customers may change, and your competition will certainly change. In fact, most application costs occur after implementation. A rigorous lifecycle analysis that realistically estimates ongoing maintenance by in-house developers often tips the balance in favor of buying.

Some companies prefer to bear development costs to ensure ownership of intellectual property. It's a proposition worth careful thought. How much is the IP worth in the competitive analytics market? Will the value endure long enough and ensure a strong enough competitive edge to pay off all costs? All of these costs must be compared with the out-of-pocket for a purchased analytics application.

Conclusion

The decision to build or buy your embedded analytics solution will depend on your organization's current situation, priorities, and resources. These seven factors will help you in your evaluation:

- Which option allows you to provide the most value to your customers through its analytical capabilities?

- Which of your options deploys fastest?

- Which option provides the most flexible deployment and easiest scalability?

- Which of your options best positions you to meet evolving customer needs?

- Which best meshes with your core offering as a continuous experience?

- Which reads any data you and your customers can throw at it?

- What makes the most financial sense as an investment?

With all this in mind, we believe the data speaks for itself. According to the Aberdeen research report Insight in the Moment: Analytics Embedded at the Point-of-Decision, software providers that buy instead of build experience a 20% faster time-to-market, 60% higher growth in cross-sell upsell revenue, and double the improvement in customer renewal rates. The report also shows that buyers tend to have more strategic, long-term planning for their analytics solutions than builders, as well as more embedded capabilities, like predictive analytics.

Finding the right analytics provider for your embedded solution can result in a strong and lasting partnership. Of course, such an investment means additional considerations, as you'll work closely with the provider from evaluation and proof of concept through to implementation and ongoing improvements. The right analytics partner will offer a flexible and modern platform, transparency and collaboration through the entire development cycle, and additional support resources for you and your customers—like a passionate, active user community.

Tableau helps Zedi's customers minimize risk with critical, real-time insights

Zedi, a leading North American oil and gas technology and services company, had struggled to find an efficient, scalable analytics platform to integrate with its Zedi Access™ SaaS platform. Generating over 47 million daily data points from 1.3 million sensors, Zedi wanted to provide real-time data so customers could monitor the health of their equipment in the field.

In many cases, an oil and gas producer wouldn't be able to spot production interruptions until the close of month. For every day that passes with defective equipment, Zedi's customers are wasting money. As Senior Technology Product Manager Doug Watt said, "That's a risk, because if something's failed with that device, they're not getting any value from it."

Zedi chose to embed Tableau Server within Zedi Access™ and now customers can choose refresh schedules or get valuable data in real time. With Tableau dashboards, customers can spot, respond, and resolve issues within one day—reducing downtime and decreasing the monetary risk that comes with an outage.

> **"** Tableau is critical to delivering those types of insights, because it's about how you visualize data in a way that's efficient and allows customers to quickly sift through all the reams of data to get to the points that they most care about."
>
> — Doug Watt, Senior Technology Product Manager, *Zedi*

"We feel that it has helped differentiate us, allowing us to reduce churn and sustain our higher monthly recurring revenue," said James Freeman, Chief Technology Officer. The flexibility and configurability of Tableau has even helped Zedi expand applications of their product and its underlying IoT platform to industries beyond oil and gas.

Learn more about Zedi's embedded analytics experience with Tableau by reading the full story.
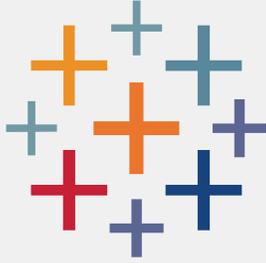
About Tableau

Tableau is the enterprise analytics platform that helps people see and understand data. Give people access to intuitive visual analytics, interactive dashboards, and limitless ad-hoc analyses that reveal hidden opportunities and eureka moments alike. Get the security, governance, and management you require to confidently integrate Tableau into your business application and deliver the power of embedded analytics at scale.

Additional Resources

Tableau Embedded Analytics Overview

Adding Value with Embedded Analytics Guide

Modern Analytics Evaluation Guide

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