



WHITE PAPER

Build vs. buy: How to make the right choice for your data product

BUSINESS INTELLIGENCE

The distance from here to there

Choosing whether to build or buy analytics is one of the most complicated—and critical—choices that your organization can make. Your decision can have serious implications for both your product roadmap and your budget. At Infor® Birst, we've been there before. We've been faced with tough, almost overwhelming decisions ourselves and learned the essential elements you need to consider when deciding how to implement analytics within your data product.

You can't just embed any analytics—you need amazing analytics. Where just a few years ago online and interactive features were enough to win the hearts and minds of end users, it's no longer that simple. Today's users expect features like drill-down, filtering, sorting, and customization of analytics. They assume your application will provide different modes or dashboards for various user roles and that the information provided will be near real-time. These features, and many like them, have become table stakes, as users grow more familiar with anywhere, anytime access to analytics.

Can you build enough functionality fast enough to meet these ever-increasing customer expectations? Or is it more cost-effective to buy them. This paper will help you decide.

The never-ending story

Even if you determine that you can build your analytics fast enough to meet your users' needs: Can you keep up this pace? Consider two strategies commonly used when creating embedded analytic products, **differentiation** and **neutralization**.

In a **differentiation strategy**, you are trying to set your product apart from the competition by developing analytic functionality that can't be matched, making your competitors look plain and feature-weak. In this scenario, you can't release your analytic product and stop development—you must keep up developing new functionality or the competition will catch up. Worse still, they'll be able to learn from your efforts and the time (and money) they need to match your functionality will be less than what you needed to get ahead. This is not a good situation for you.

In the **neutralization strategy**, things aren't much prettier. Here you devote time and budget to achieving parity with a competitor that is ahead of you in the analytic space.

You work hard to build the similar analytical capabilities so that you can compete in the market and... stop? Unfortunately, you can't stop once you've got the first iteration of your analytics product in the hands of your users. If you do, your competitors will move out ahead again and all of your effort playing catch-up will be wasted. You need to keep pace with the competition, building and neutralizing whatever new functionality they develop. Essentially, your competitor—not you—dictates your analytic product roadmap. Again, this is not ideal.

When deciding whether building analytical functionality is the right way to go, don't just think about whether you can build it today. Consider whether you've got the budget, resources, and discipline to keep up the development pace over the years to come. If this sounds risky to you, you might be better off buying your analytics.

Consider strategy alongside costs

Deciding between buying or building analytics often defaults to the simplest metric possible—cost. While cost is a critical consideration in your decision, it shouldn't be the only deciding factor. You need to make a balanced decision considering both monetary factors and strategic elements. The best way to do this is by considering your decision as an equation: the cost-side savings have to be great enough to offset the risks associated with building your own analytics.

The cost side of the equation is easy: Will it cost less to build analytics than to buy analytics? Sure, this seems easy. In fact, most people forget to include many of the tasks they will need to account for when building analytics. Some items are obvious, such as:

- Buying the software to make the visuals
- Building connectors to data sources
- Creating dashboard pages, reports, charts, and other visualizations

Other activities might not be so apparent. These include items like:

- Performing QA
- Performing transformations
- Creating data aggregations
- Creating dimensions
- Creating filters
- Building drill-down/across paths
- Building the multi-tenancy model
- Building the security model
- Creating data model for targets
- Building the UI for target setting
- Building the UI for alerts
- Building user management capabilities
- Building monitoring

If it sounds like a lot to consider—you're right. Building your own analytics means you must plan for everything from onboarding users to maintaining security to tracking utilization and planning for future releases.

As many cost factors as there are to consider, it's usually the non-monetary components that product owners fail to address. This side of the equation represents risk. Risk of not getting to market fast enough. Risk of not building functionality that is on-par with what users have come to expect from analytic applications. The risk of failing to keep pace with the competition as they advance their capabilities over time. And finally, the risk associated with focusing your development team on solving a problem that others have already addressed—analytics—rather than building out your core application.

The problem is that risk is much harder to quantify than cost. As a result most business leaders overlook this part of the equation. Fortunately, there's an easy way to wrap the entire build vs. buy, cost vs. risk equation into a simple matrix for easier evaluation. The matrix takes these questions into consideration:

- Can we build it **fast enough**?
- Can we build it **good enough**?
- Do want to **keep building** it?
- Could we be **doing other things**?

By using the four risk criteria of **fast enough**, **good enough**, can we **keep building it**, and could we be **doing other things**, the matrix then assigns each score based on how well you believe you'll be able to address each factor.

Think that you'll be unable to build fast enough to get out ahead of your competitors? That's a high risk and is assigned **5 points**. Once you've got each of the categories evaluated, the matrix then helps you determine which of the categories is the most critical to your success and assigns a score for that as well.

If building quickly is very important to your business (give it a rating of **3 points**) and you have determined that you can't build very quickly, the matrix highlights this as an extreme risk in building analytics.

	LOW (1 POINT)	MEDIUM (3 POINTS)	HIGH (5 POINTS)	OUR RATING	IMPORTANCE (1=LOW TO 3=HIGH)	TOTAL
Can we build it fast enough?	We've got a development team dedicated to analytics, fully-trained in the entire stack, and can build quickly.	We've resources, but may have trouble building quickly enough to achieve table stakes.	We don't have the resources/ don't want to dedicate the resources to build analytics.	5	X 2	= 10
Can we build it good enough?	Yes—we can build the all the basics plus functionality to differentiate ourselves from the competition.	Maybe—we can add some table stakes, not all. Maybe our delighters will outweigh the gaps in the functionality.	Nope—we'd have trouble getting to table stakes.	5	X 3	= 15
Do we want to keep building?	Yes—this is where we will compete so we'll devote equal resources to analytics develop as our core app.	Maybe—we could add some functionality over time but it would be secondary in importance to the core app.	No—we'd prefer to use our resources on other things.	3	X 2	= 6
Could we be doing other things?	No—analytics are the app for us. We consider this to be the core of what we do.	Maybe—analytics are important and our core app roadmap is not full.	Yes—we can add more value by working on our core application.	2	X 3	= 6
					Grand Total (possible 60 points)	37 points

After evaluating the importance of each category and determining the risk level, you simply add up the scores to create an overall risk factor for building your analytics platform. Of course, a rating such as **37 points** doesn't mean much by itself—you need a way to evaluate that number and decide if the risk level is acceptable.

GREEN ZONE

0—20 points (Low risk)

Consider building your own analytics

- You likely will be able to build fast enough and keep building fast enough to hold of the competition

YELLOW ZONE

21—40 points (Medium risk)

Consider a combination strategy

- You may be able to build fast enough and keep building fast enough to beat the competition in select areas

RED ZONE

41—60 points (High risk)

Consider buying your analytics

- It is unlikely you will get to market fast enough or be able to stay ahead of your competition

Once you have your overall risk score, use the risk spectrum to help you assess exactly how risky building your analytics might be. If you have a low score—between **0 and 20 points**—you may be well-served by building your platform. Organizations on the low side of the scale may be able to build fast enough, well enough, and keep up the pace to outperform their competitors.

However, organizations that have a high-risk score—above **40 points**—should consider whether buying analytics might be a better choice. In these cases, taking advantage of the table-stakes functionality already developed by analytics firms, such as Infor has with Infor Birst®, and focusing instead on the core application functionality might be a more effective strategy.

There's another alternative to be considered and that is what we call the **hybrid model**. In this scenario, you might choose to build some of your analytics but buy others. For example, one company we know decided that they could build some basic operational analytics (a few bar charts inline with workflow data which didn't require extensive interactions) but that they should buy their "exploratory analytics," which allows users to drill deeply into the data.

How to make a balanced decision

It all comes down to this: Don't exclusively use the same criteria—cost—that most buyers of internal-facing analytics choose. While a CIO might be focused primarily on the cost per feature when deciding to buy or build, you as a product owner face a different challenge. Of course, you should be concerned about cost, but you also need to consider how quickly you can build to differentiate from the competition, if the analytics you build will be good enough to create user engagement, and if you will be able to keep pace with your competitors who leveraged BI platforms instead of building themselves.

There's no single answer that fits every situation. Each company, each product is different. You needn't face this dilemma alone. Consider your goals, calculate your true costs to build, then weigh the risks against those costs. If you use this strategy, you aren't guaranteed the perfect answer, but you'll have performed the right analysis to reach a well-informed decision.

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