GoodData

GoodData Corporation

Differentiate with Analytics

Does your product need analytics?

Overview

More people than ever are finding themselves in jobs that require them to interact with some form of software on a daily basis. That makes embedded analytics particularly valuable, because of its ability to help users understand how much, how fast, how often, or how well they're performing. When analytics are embedded into those users' workflows, users are able to make better decisions and take actions faster and more effectively than if insights were delivered periodically by a dedicated group of analysts.

While these benefits are fairly clear-cut, product owners still need to consider whether their product truly needs analytics, what they want to accomplish through the use of analytics, and how to get to that point.

What do you want to accomplish through analytics?

At this point, most companies are likely already fairly familiar with the benefits that analytics can deliver to end users, like faster, more data-driven decision making and improved efficiency. However, for all these benefits, analytics are not a silver bullet. They need to be deployed correctly and with a clear end goal in mind if companies want to begin to realize these benefits.

Before making more specific, concrete plans about how analytics will be used for an application, start by thinking broadly. Define what the ultimate big-picture objective is. What needs to be achieved through the use of analytics? In discussions with customers, GoodData usually sees those big-picture goals fall into one of three categories.

Increase new user adoption

This goal is one of the most common ones cited by companies. Faced with the ever-increasing challenge of securing new customers and increasing user adoption, companies may feel that they've exhausted their options. In this respect, introducing analytics to your product can give you a much-needed edge needed when talking to new customers. In this scenario, these companies rarely charge for additional functionality offered by analytics, instead treating analytics as a new feature that makes the product as a whole more competitive, desirable, and better-functioning than competitor products.

Generate additional revenue

Another common goal for companies interested in analytics is to increase revenue. With any number of business challenges ahead of them, they turn to analytics as a way to drive additional revenue, typically through the use of tiered pricing. If this is you, consider whether you'd like to use analytics to create a paid tier-or multiple tiers-within your product. This route could include a base model that's more competitively priced and has basic analytics, then more advanced analytical features in premium tiers to encourage upselling. This goal is also particularly common because it directly ties analytics to revenue, which may make it easier to get buy-in on the initial investment from the C-suite.
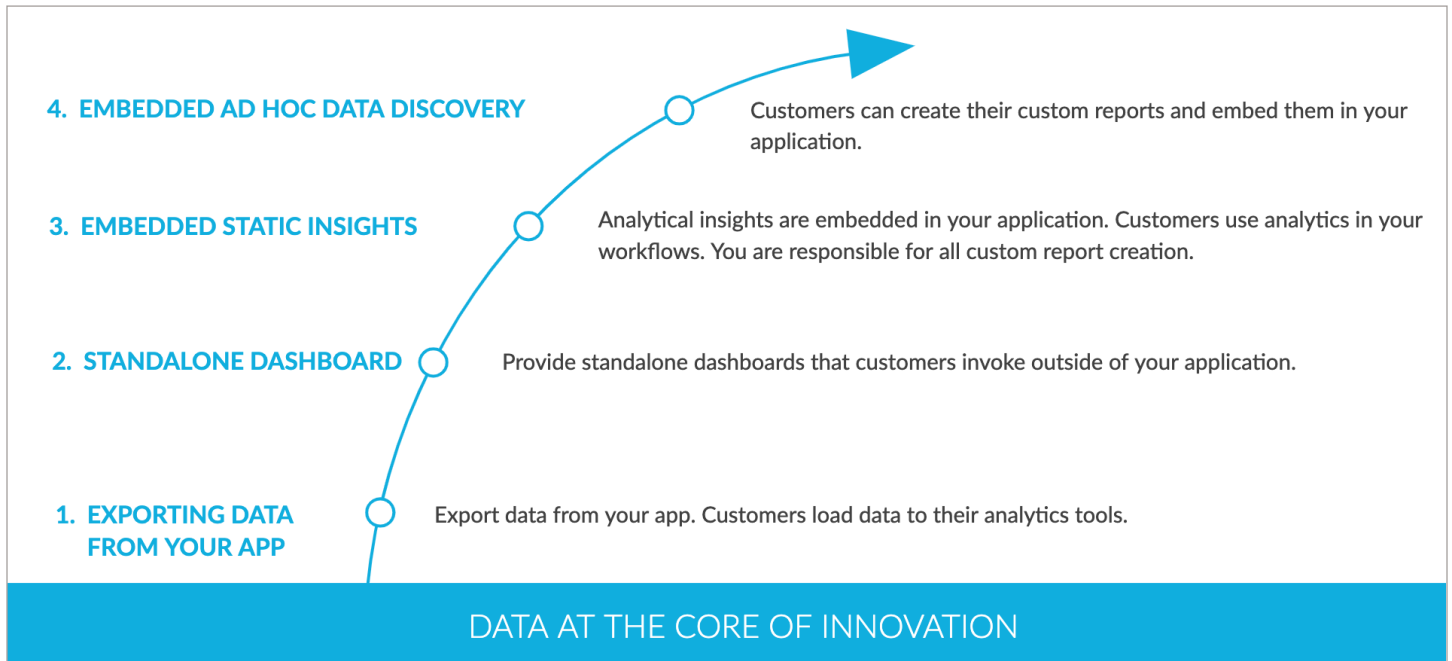
Improve user loyalty

Finally, the third most common end goal for most companies is to keep existing customers coming back for more. In this scenario, introducing deeper analytics into your users' workflow is an excellent way to make a product more "sticky." Consider creating advanced capabilities that will make it hard to migrate from your product to other products from competitors. Not only will these capabilities ultimately help your users do their jobs better, but the introduction of analytics tailored to their needs lessens the burden placed on the user.

How can you begin using analytics?

Once you've determined what you want analytics to help you achieve, the next step is to explore the steps you need to take to get to that point. Typically, we recommend setting up a maturity model for engagement and adoption that illustrates what the analytics are capable of doing at each point and what the users are getting out of it.

4. EMBEDDED AD HOC DATA DISCOVERY — Customers can create their custom reports and embed them in your application.

3. EMBEDDED STATIC INSIGHTS — Analytical insights are embedded in your application. Customers use analytics in your workflows. You are responsible for all custom report creation.

2. STANDALONE DASHBOARD — Provide standalone dashboards that customers invoke outside of your application.

1. EXPORTING DATA FROM YOUR APP — Export data from your app. Customers load data to their analytics tools.

DATA AT THE CORE OF INNOVATION

Initially, analytics will deliver insights that enable users to do their jobs better, but as you continue along the maturity model, analytics will ideally allow you to disrupt the competitive landscape. However, reaching this point requires you to go "all in" with an analytics effort to ultimately embed ad-hoc data discovery capabilities into your product.

Methods of using analytics

1. Exporting data from your app

This route is essentially the bare minimum of what's necessary to consider your product one that "uses analytics." This approach is the most helpful for users from larger companies that already have an analytics strategy and simply want to export data into their own tools. It requires the least investment and can get up and running quickly, but there are some major cons, as well.

First, this method delivers very little added value to customers-a problem when you consider that most companies introduce analytics to increase adoption, gain additional revenue, or improve loyalty. Second, the siloed analytics experience means there's no sense of consistency for a company's customers, and that makes it difficult to support each customer and their unique methodologies, KPIs, and metrics. Finally. This bare-bones approach eliminates any possibility of you using analytics to help motivate end-users to take certain actions, because you have very little control over how your customer uses analytics.

2. Standalone dashboards

Standalone dashboards are one of the most common ways analytics are used within products. Think of a project management system that has a separate dashboard showing you which projects are on-track, which are delayed, and the percent complete that each project is. These dashboards deliver value to users right away, and it's much easier for companies to drive consistency and support their users.

However, separate dashboards are usually plagued by low adoption rates. When users must open a separate dashboard outside of their workflow, the burden is on the user to take the time to explore what the analytics are saying. In addition, all reports that the dashboards generate must be manually created by your own engineers, analysts, or support staff, which leads to backlogs and slow response time.

3. Embedded static insights

With embedded static insights, the analytics are embedded into an application or workflows, and users can access a pre-defined set of insights as they go about their daily workflows. This results in much higher adoption rates, because users are experiencing analytics within their context. Because users are able to see analytics within the context of their work, the analytics also seem much more actionable, and users are able to directly see how results relate to the actions they take.

But while this solves the adoption rate problem so common with static dashboards, embedded static insights still require your engineers, analysts, and support staff to generate custom reports for your users. That backlog time may also sour your users, who would expect more responsiveness from a seemingly more robust form of analytics.

4. Embedded ad hoc data discovery

At the highest, most robust level, analytics are embedded into an application or workflow, and they also enable end users to customize insights and dashboards on the fly. With this model, business users can take advantage of a full range of self-service capabilities and get the insights they need much faster. There's no backlog as is so common in other forms of analytics; instead, users can address most requests themselves and essentially hit the ground running.

What analytical capabilities you should consider?

Typically, capabilities fall into one of three possible categories. Your path forward will need to take into account which-or all-of these capabilities you want to pursue for your product or application. Those capabilities are:

Descriptive
Using analytics to analyze the business data generated by your application

Predictive
Using predictive models to forecast business KPIs

Prescriptive
Determining business actions or recommendations based on the outcomes of analytics

If you're interested in descriptive capabilities, you're looking for analytics that show you what happened and why. Perhaps your company does a lot of remote monitoring, and you'd like to be able to use analytics to analyze sensor data to help you understand why a failure can occur.

If you're interested in predictive capabilities, you'd like to use analytics to analyze business data, then use that data to predict likely future events based on this analysis. Along with these predictions, you'll also see recommended actions to take. To continue with the example above, perhaps your analytic solution was able to figure out that sensor failure rates increase once the sensor reaches three years of age, and it suggests that the sensor be replaced before that point.

Finally, those interested in prescriptive capabilities are looking to automate decision based on the analytic solution's recommendation, freeing employees up to focus on high-value decisions. In the sensor example, an employee wouldn't receive a recommendation to replace a sensor, because the employee wouldn't be involved in the ordering process at all. Instead, the solution would continually analyze sensor data to understand what conditions correlate with early failure, learn to predict when those failures will occur, and take preventive action by ordering a new one and issuing a work order.

Once you've determined which of these capabilities you're interested in pursuing, you can then begin to understand which specific technical capabilities can help you get to that point. Bear in mind that higher-level capabilities require moving much farther along the analytics maturity curve.

Data ingestion

With your analytics, you'll need to ingest data from various sources, like Excel, databases, or a custom program that your company uses. How able will your analytics solution be to successfully ingest and use that data? Whether you build or buy, make sure this is one of the first things you discuss, because the data ingestion process will need to be particularly robust. For example, GoodData's platform includes 150+ connectors for data ingestion and synchronization so any data source can be fully supported.

Data consolidation in data warehouse

Once all those pieces of data from multiple sources have been ingested, they'll need to be consolidated into a data warehouse. That warehouse will need to be able to accommodate all of the users of your application so you can build analytical data models, benchmarks, and thresholds. For this, flexibility is key. Look for platforms that allow for easy integration with existing on-prem or cloud data warehouses.

Data privacy

As your user-base grows, you'll need to be able to provide strong data isolation for all of the different users-or tenants-of your application. Each of those users will need to be able to access a totally distinct experience that keeps their data secure and private, while still taking advantage of key capabilities. Businesses need to plan for how to change analytics at the same pace as their application, how they will make analytics instantly available, how they will comply with security and regional regulations. The right analytics solution will make this process easy, so organizations can focus on their core business instead of managing the components and costs needed to support analytic solutions.

Application integration

Successfully implementing analytics requires planning for how data will evolve in type, size, and source. The insights you're embedding will need to work on multiple platforms-across web and mobile-and make it easy for users to sign on to one single version of your application. With this in mind, you'll be looking for capabilities that include single sign-on, strong security protocols, and embeddable data discovery mechanisms.

Easy to use ad hoc data discovery for business users

Not all business users are analysts or technical professionals. Knowing this, you'll need to find an analytics tool that guides technical and non-technical professionals alike through the analytics methods and semantics of their data. Look for a platform that specializes in business-user friendly analytics, with technical features that separate users from the sheer volume of data being processed behind the scene. For example, GoodData's semantic layers serve as a buffer from what we refer to as "data chaos," making it easy for any user to successfully use analytics.

Life cycle management

Over time, you'll want to innovate and evolve the experience for all your customers for the better, rolling out new versions and enhancements while still maintaining the customizations that they've introduced. You'll also want to be able to provision or deprovision components in real time, to ensure there's no inconsistency in the user experience as new features are added. A robust analytics solution will have these life cycle management governance processes in place, making it easy to accommodate agile change management and dynamic provisioning as needs change.

Scale to large data volumes

Depending on your use case, you may need to compute embedded insights instantaneously with no multiple-second latencies. As your customer base grows, you'll need to be able to accommodate ever-increasing volumes of data while maintaining the same low-or ideally no-latency that you were able to accomplish with smaller user and data volumes. Will your analytic application be able to scale to address all of your customers' unique needs? The right embedded analytics platform will feature data preparation and distribution tooling that has been designed to start small and scale as needs change.

Elasticity

You don't want to build a different or faster version of your application for different customers. Ideally, you'd want one application that's capable of handling any customer's needs, whether they're a large corporation or a small startup. Platforms like GoodData's are fully monitored, ensuring that the appropriate performance levels are achieved at any given time. The fully managed infrastructure, unique distributed workspace architecture, and platform components provide four key capabilities required for a comprehensive end-to-end architecture that businesses will need for data and analytic solutions.

Additional resources

If you'd like to discover more about embedded analytics and the GoodData platform, we have a number of additional resources available.

Learn more

Visit GoodData's embedded analytics website to learn more about different types of embedded analytics, solutions, benefits, and additional customer success stories.

Embedded analytics trial

With the embedded analytics trial, you can see GoodData's analytics platform embedded in an application's user interface so you can get a clear example of what embedded ad hoc data discovery looks like. Explore a demo application enhanced by analytics visualizations, then create analytical insights using an intuitive drag-and-drop experience.

Technical paper

For technical professionals, this paper is designed to give you an overview of exactly how GoodData is able to deliver powerful analytics to massive audiences while still being the most cost-effective platform on the market. It explores how our modular platform provides the tools, runtimes, and storage for data ingestion, preparation, transformation, analytic queries, data visualization, and application integration.

Platform trial

For data engineers who'd like to see the platform in action, take a look at our platform trial. With the trial, you can learn how to build and deliver powerful analytics, including creating reusable, context-aware metrics for business users.

GoodData.UI and Live Examples

For UI developers looking to explore more in-depth information on how the GoodData platform can be customized, take a look at GoodData.UI. By referencing our JavaScript library, you can take a look at how you can easily customize visualizations and build applications with our ready-made and custom React components.

Get more information

Have a question or want more information that we didn't cover here? Our team is happy to schedule a call.