The product manager's guide to

embedded analytics users love

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Introduction

Everyone knows apps run the world. And those apps run on data. However, a huge change has come in how that data can - and should - be used. The most successful companies aren't just using data to power their apps. They're putting that data, and more importantly, the insights buried in it, in the hands of their users.

As in-app data exploration becomes the new standard in the user experience of both B2B and B2C apps, users expect these applications to offer analytics to help them get value out of their data.

Product leaders and developers are facing new challenges in delivering an analytics experience that puts them ahead of the competition. Curious users often need to ask a series of questions before they derive real insights. And when they're in an app, they don't have analysts or developers to help them ask those questions. They're on their own.

For users to really get insights, they need the analytics to be self-service and interactive. Otherwise, the app would spark users' curiosity and yet leave them unsatisfied.

Analytics requires tools that can be as flexible as the human mind; every time a new question is sparked, the system must enable that question to be answered. This has to be true even as the amount and kind of data rapidly change. Even more importantly, the answers should drive action. But building a solution from the ground up can be very technically difficult and cost-prohibitive, plus it requires lots of time and usually still results in low adoption.

So how do product leaders help their developers have a great in-app analytics building experience? How do they put out a product that keeps their users coming back for more?

What's the potential to grow their business if they can get embedded analytics right? Product managers have a massive opportunity to increase customer satisfaction, usage, and overall revenue by improving the analytics experience in their products and apps.

This guide covers why this should be on every product builder's radar, and what they need to know to create sticky, differentiated analytics experiences that keep users coming back for more.

Don't sweat it if you don't have the time to take in everything right now, because you can check out the **stat highlights right here.** ⊙

Part 1

WHO TOOK PART

Who took part

We couldn't build this guide without help from the product management community.

So before we dive in, let's look at who took part. From the Heads and Directors of Product to Associate Product Managers and more, so many took part in our survey, all hailing from a variety of companies varying in size and scale. Here's a selection of those that took part...

mPharma   [P E R S A D O]   fullstory   learnlight 15   Rabobank

nexlabs   supporting education   jimpisoft   Bigabid   STAR COMPLIANCE   Spryker

amazon   FOR-SIGHT   CHRISTENSEN   Lyra   xplor

WF   workato   Moody's ANALYTICS   TimeWarner   Grip

RepairDesk   Pollfish   evidation HEALTH   ROLLER

SAE   essity   Skyscanner   LinkedIn   officernd

Who took part?

By region

Our respondents hailed from all around the globe, with North America representing the largest **(42%)** sample by far, with Europe **(20%)** being the second largest sample pool followed by South America **(15%)**.

Europe

North America

20%

42%

9%

8% **Asia**

15%

Middle East

South America

6%

Australasia
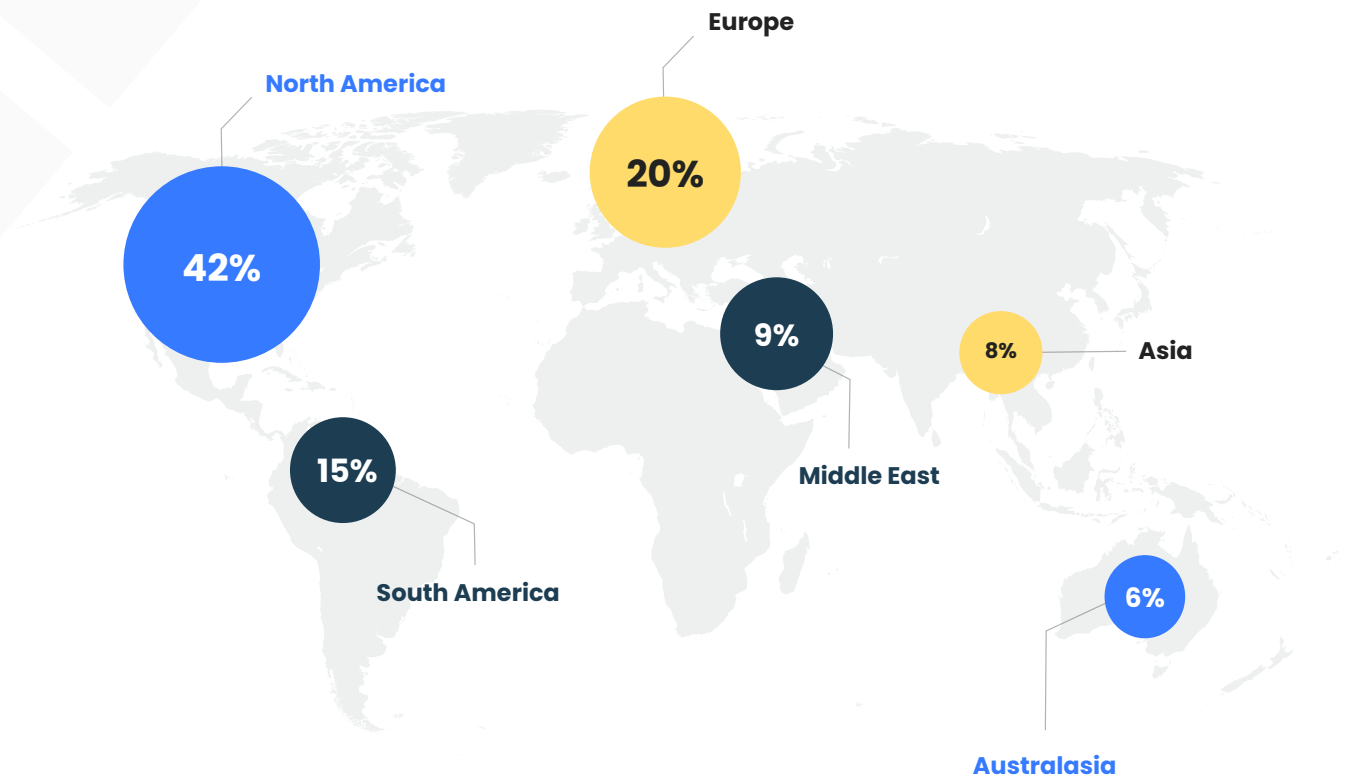
Part 2

WHAT IS EMBEDDED ANALYTICS? WHO NEEDS IT?

To be the most effective PM, you must be data-focused. After all, using data to inform product decisions is essential - but it's only half the battle?

There's a huge opportunity to embed analytics into a product or service and failing to do so is like leaving money on the table...

In this section, we break down the value of embedded analytics, what will be positively impacted by integrating embedded analytics, the biggest challenges in building an embedding analytics solution, and more.

What is embedded analytics? Who needs it?

Do you offer embedded analytics in any of the products your company sells?

To kick things off, we asked our respondents whether they already offered embedded analytics in their products and **55%** revealed they did. Highlighting how the value of embedded analytics is growing but there's still some development to be made.

No ● **45%**

Yes 55% ●
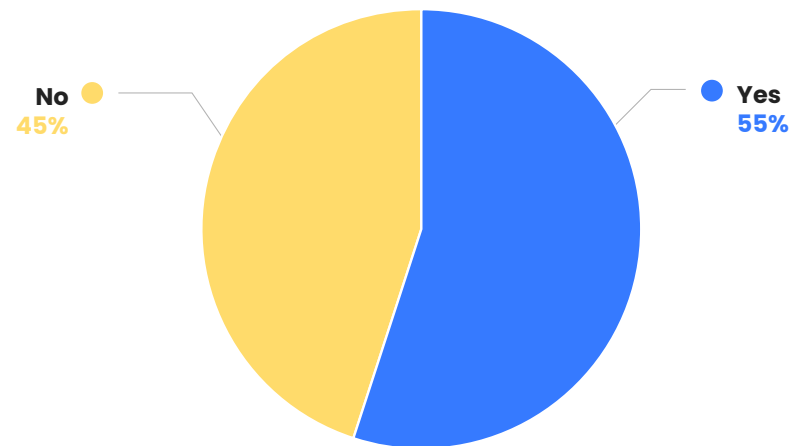
What is embedded analytics? Who needs it?

Which of these outcomes will be positively impacted by embedding analytics in your app, product, or service?

Not every product needs the most sophisticated analytics features to reach success, but to stay competitive, increase revenue and keep future-proof - you need to be up-to-date! Now, is the best time to realize the value and opportunities embedded analytics offers to push you past the new baseline.

We asked our respondents to let us know about the positive outcomes embedding analytics would have in their app, product, or service. Close to half **(44%)** of respondents think **embedded analytics would boost revenue**, with just over a quarter **(26%)** citing it would have a **positive effect on engagement.**
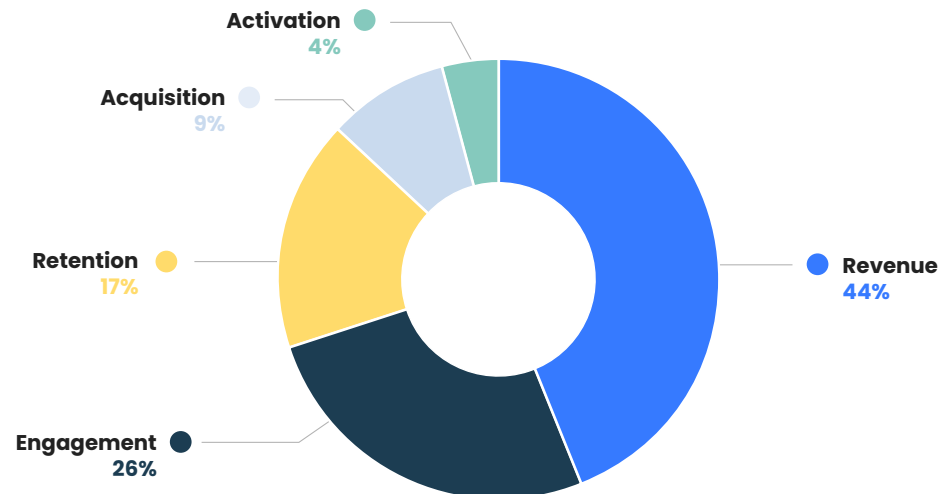

So as our survey results suggest, it can certainly be said that revenue is the most important benefit of embedded analytics. Of course, it also helps with leading indicators like user engagement and retention, etc., but most embedded analytics projects are more closely tied to driving hard revenue impact.

What is embedded analytics? Who needs it?

Over the last 12-18 months, what have embedded analytics directly resulted in?

Of those that had a solution in place, **61%** stated that embedded analytics had **directly resulted in increased engagement**, with way over half **(57%)** confirming that **embedded analytics had had a direct impact on revenue.**

61% Engagement

57% Revenue

49% Retention

24% Activation

16% Acquisition

18% Other
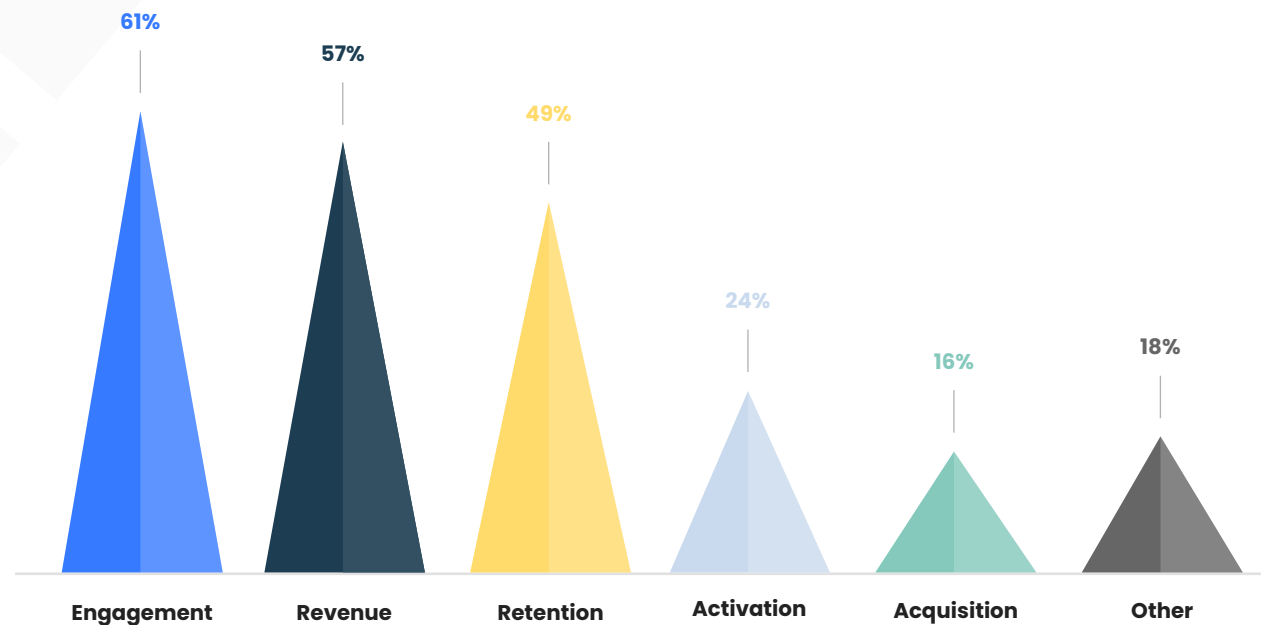
Those that fell under the 'other' bracket either didn't offer an embedded analytics solution or couldn't yet measure the results.
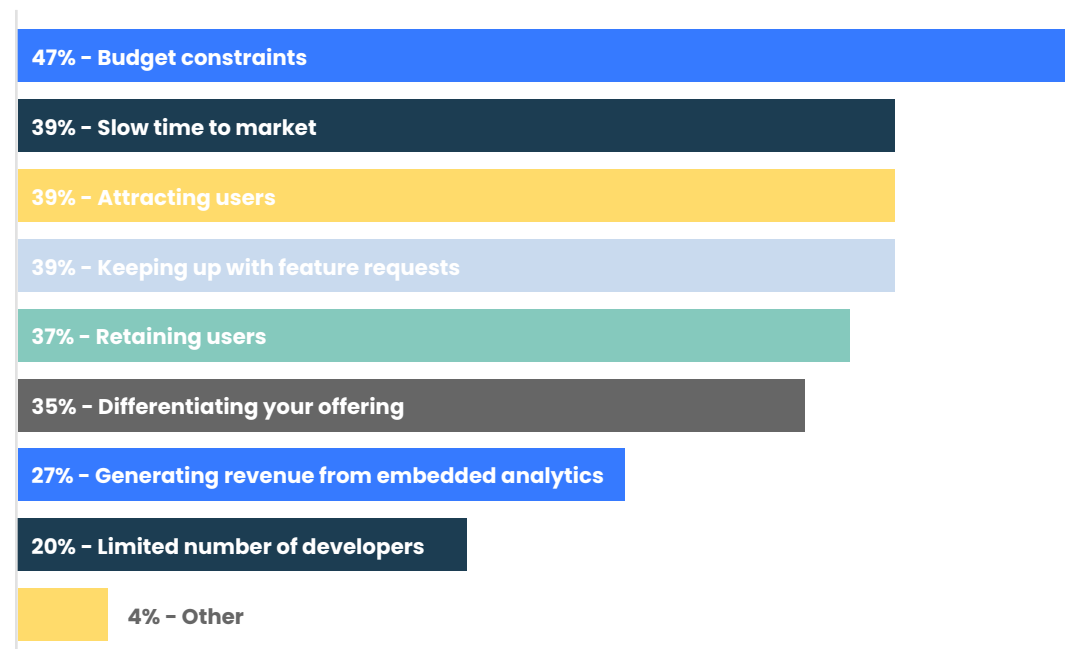
What is embedded analytics? Who needs it?

What are the biggest challenges in building an embedding analytics solution?

This advancement in analytics options has led to new challenges, mainly that the modern user expects a lot more. As users search for greater insights, the increased accessibility and demand for sophisticated analytics features have continued to rise. Therefore you need to stand out from the crowd.

If you're convinced that you need an embedded analytics solution, you're likely wondering which approach to take and weighing up the pros and cons of building an embedded analytics solution versus buying an embeddable one.

But what are the challenges stopping orgs from building an embedding analytics solution? We dug a little deeper and our respondents highlighted **budget constraints (47%)** as one of the biggest, with **attracting users, keeping up with feature requests, and slow time to market** coming in equally second at **39%.**

47% - Budget constraints

39% - Slow time to market

39% - Attracting users

39% - Keeping up with feature requests

37% - Retaining users

35% - Differentiating your offering

27% - Generating revenue from embedded analytics

20% - Limited number of developers

4% - Other

What is embedded analytics? Who needs it?

Those that fell under the 'other' bracket highlighted getting the 'buy-in from C-suite' and the 'uncertainty of clearly defining embedded analytics and its use case' as major challenges.

With so many of our respondents citing budget constraints as a roadblock to an embedded analytics solution, it's clear that organizations don't always have the resources necessary to do this successfully. Or consider embedded analytics as something nice to have, but not a "must-have" solution.

However, if your organization doesn't have the resources or budget necessary to build in-house, this is all the more reason to integrate with a well-established provider. They can not only bring the expertise necessary to implement embedded analytics successfully, but this option is actually less expensive.

Why? Because it doesn't require dedicated internal resources, it offers greater ROI, reduces maintenance costs, and improves innovation. Plus, you can start small and look for the exact tools that fit your architecture and development process.

Embedded analytics has changed the game for applications, and it has now very much become a "must-have". Not only can it help build product value and enable users to work more productively, but it can also improve sales demos, drive faster revenue growth, and provide a competitive edge.

What is embedded analytics? Who needs it?

Let's dig into some of the other challenges shall we:

Attracting/retaining users - With embedded analytics, there shouldn't be any doubts when it comes to attracting users. An embedded solution can deliver new capabilities and functions to your application, offering automated insights and enabling users to code their capabilities. Users will be attracted and keep coming back thanks to an improved UI and flexible design options.

Keeping up with feature requests - Whether it's bug reports, product improvement requests, or whole new feature requests - embedded analytics can help users find the answers to their questions without having to reach out for support. With seamless access to data, users can pinpoint the answers they want and gain real-time insights where they need them.

Slow time to market - This boils down to making better decisions. With embedded analytics, you can quickly and seamlessly pinpoint areas for improvement and opportunities for growth, which leads to smarter purchasing decisions that streamline your processes. Not only does this save time and reduce unnecessarily spend, it also improves your bottom line.

Retaining users - If you're concerned that your analytics offering will struggle to retain users... don't be. It provides an opportunity to keep up with rapidly changing user demands. By placing the right data, in the right place, at the right time, you can create seamless, personalized experiences that enhance engagement and increase user retention.

Differentiating your offering - Embedded Analytics empowers you with competitive differentiation and offers a sustainable competitive advantage within an application. If you're looking to differentiate your offering and stand out from your competitors in the market, then modern analytics embedded within the application can help you understand how. You'll be able to produce more data than ever, serve up actionable insights and unlock a wealth of critical insights that are locked in your application.

What is embedded analytics? Who needs it?

Getting that buy-In – This was mentioned by some of those we surveyed and understandably not all members of a team will immediately see the value of investing in embedded analytics.

How exactly would you get them onboard?

Well, it's all about understanding their priorities and challenges. Once you do, you can demonstrate how embedded analytics can easily address their specific concerns.

You need to gain internal support by aligning things with the strategic initiatives of your org. Show how this potential solution can solve the high-value problems your org is tackling, by positively impacting your users and the bottom line.

It's important to address the challenges and goals of each stakeholder when getting that embedded analytics buy-in. Be crystal clear about time to value and don't overpromise:

- Develop a business case that addresses your stakeholder challenges, and create a quantitative analysis that shows how embedded analytics can meet these goals.

- Ask the right questions to really understand what your stakeholders are looking to achieve. Then show them how the solution can meet those objectives efficiently and effectively.

- Use real-life case studies to support your position.

- Have your plan ready and waiting. Ensure it includes an overview of the next steps, timeframes, and required resources.

What is embedded analytics? Who needs it?

What are PMs responsible for when it comes to embedded analytics?

For many product teams, building the initial minimum viable product (MVP) and getting market-ready was the main focus. Analytics wasn't a priority. True, there may have been a plan to add some form of analytical capability down the line, but this is typically left to the role of developers.

For a lot of orgs, there simply wasn't the budget, it took too long to get to market, and there were never-ending feature requests. Even when these factors weren't an issue, companies had challenges around attracting and retaining users since analytics were very complex to use, and companies couldn't really differentiate their offerings.

This all leads to inaccuracy when it comes to fully understanding your product's analytical offering. It can also prevent PMs and developers from realizing what's required to make adding a feature worth it, or from seeing the possibilities of your data structure and integration capability.

The difference between adding on a data export feature that allows users to pull data and use it in another external analytics tool, and having a fully embedded analytics module that sits next to the core product experience - is, well, a big difference.

Instead of dumping data on a user, and telling them to leave your tool, they're able to manage their entire workflow right within an app. This means more engagement, retention, and most importantly value for users. And as **44%** of our surveyed PMs stated, this **drives revenue.**

PMs need to make an effort to formalize a process to guide the introduction of analytics at every phase, evaluate tools that deliver the right kind of differentiated analytics UX, and ensure users ultimately get the right data and discoverable insights they expect.

What is embedded analytics? Who needs it?

"PMs are responsible for understanding the needs of the customers and users of the embedded analytics, they need to help shape a solution that can meet those needs, and do it in a way that helps to drive their own organization's business objectives.

"Within building that understanding, the tactics they may include are:

- Discovery (interviews, surveys, workshops, etc.) to get a sense of the problem area.

- Defining the outline of the scope with priorities.

- Developing a common context for different personas to help communicate to the rest of the development team.

- The major tenants of any acceptance criteria.

- Build/buy/partnering decisions.

- Rough design, including needed data/metric points.

- Rallying the necessary team, resources, and leadership buy-in.

- Internal measurement.

- A/B testing and iteration.

- Go-to-market prep and execution (the many aspects of product marketing and launch).

- Aligning to KPIs/OKRs or other success measures."

Colin Chong, **Director of Product Management at AppDirect**

Part 3

THE MODERN DATA STACK

In this section, we explore the evolving modern data stack, the critical components, the rise of self-service analytics, and the tools orgs are investing in the most.

The modern data stack

Safe to say, data went through some huge changes in the last few years, and with so much rapid change, and new trends it's difficult for PMs to stay ahead of the curve.

The transforming software industry has led to the modern stack, which in turn is changing what it takes to build products. The entire stack that companies build apps, products, and services upon has rapidly modernized in the last 2-3 years. This modern data stack is creating an entirely new way for PMs and devs to build, launch, test, and improve products while incorporating cutting-edge capabilities from across the ecosystem.

All this innovation requires an intuitive frontend/way to actually experience the value. And one of the most critical components of the evolving modern data stack is the rise of self-service analytics to democratize data exploration. But what are the critical components of the modern data stack for traditional enterprise vs commercial/digital native?

"I think it depends on the product or services. A determination should be made around if a trivial analytics solution could satisfy the users' needs or if a more sophisticated solution is needed. For SaaS companies with large data sets, investment in an embedded BI solution is a must. The critical components include data warehouses, data marts, in-memory solutions such as SingleStore, paired with BI tools."

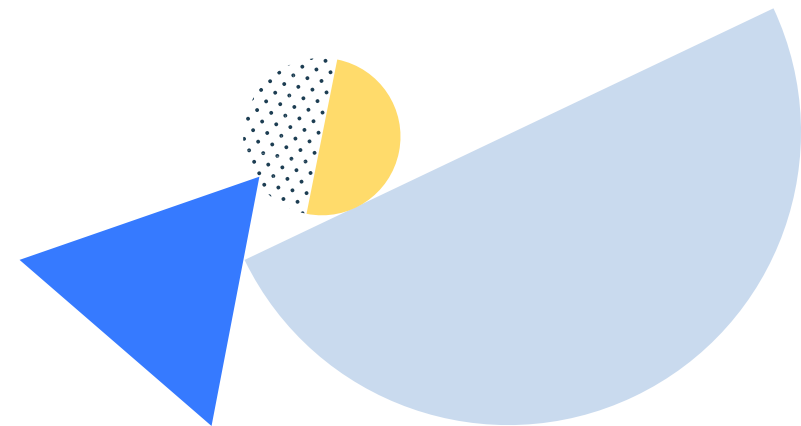**Michael D. Pierce,** **Director of Product Management at Munetrix**

Essentially, the modern data stack is creating new opportunities for product builders, as long as they're prioritizing the right pieces of the stack...

The modern data stack
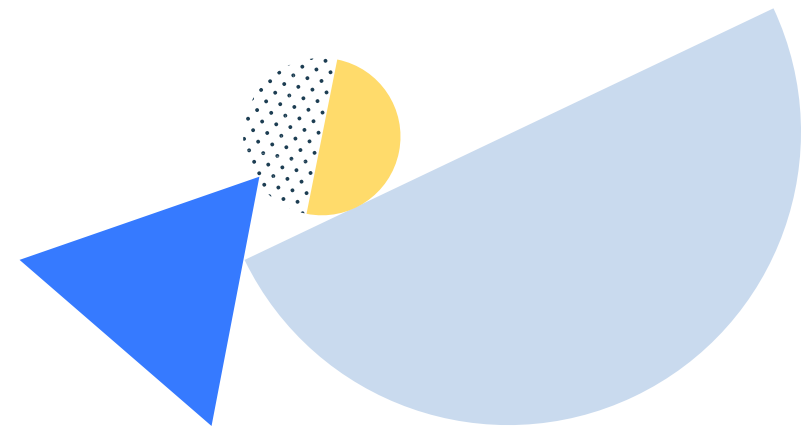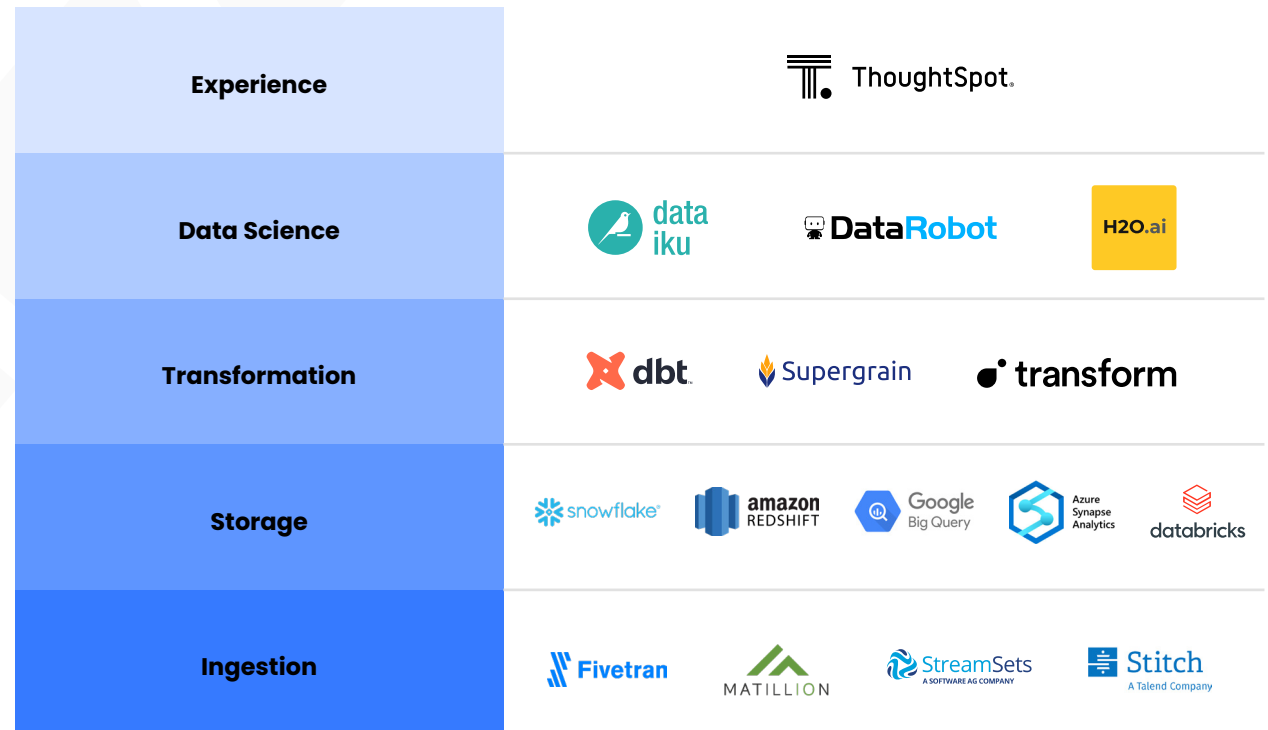
Modern data stack components:

Data stacks are usually organized into layers, but not every team needs all of these layers covered. Some product teams need to validate a few experiments, negating the need for complex transformation tools, but some might need to connect their data sources to an analytics tool. So let's break down the components:

- **Data analytics –** Helps users explore and find insights in their data. Modern data analytics include tools to help non-technical users explore data without needing to know SQL. Freeing them from depending on developers and analysts, and encouraging everyone to explore and learn from data.

- **Data transformation and modeling –** This helps package different data sources into user-friendly models. Allowing for the exploration of these combined sets without having to rely on guesswork or sift through raw data.

- **Data storage –** Where all the data coming in from the data sources is aggregated and stored.

- **Data source –** This acts as the production database (e.g. PostgreSQL), and it's common for teams to have multiple data sources, all flowing together into centralized data storage solutions.

- **Data operationalization –** This is the process of moving data from a data warehouse back into third-party systems, to make data operational.

- **Data ingestion –** How the data gets moved and normalized from the data source to the data storage.

The modern data stack

The modern data stack is a massive opportunity

Experience	ThoughtSpot.			
Data Science	data iku	DataRobot	H2O.ai	
Transformation	dbt.	Supergrain	transform	
Storage	snowflake	amazon REDSHIFT	Google Big Query	Azure Synapse Analytics	databricks
Ingestion	Fivetran	MATILLION	StreamSets A SOFTWARE AG COMPANY	Stitch A Talend Company	

The modern data stack

What are the critical components of the modern data stack?

We posed this question to our surveyed product pros and **65%** ranked analytics as the most critical component of the modern data stack.

#1 #2 #3 #4 #5

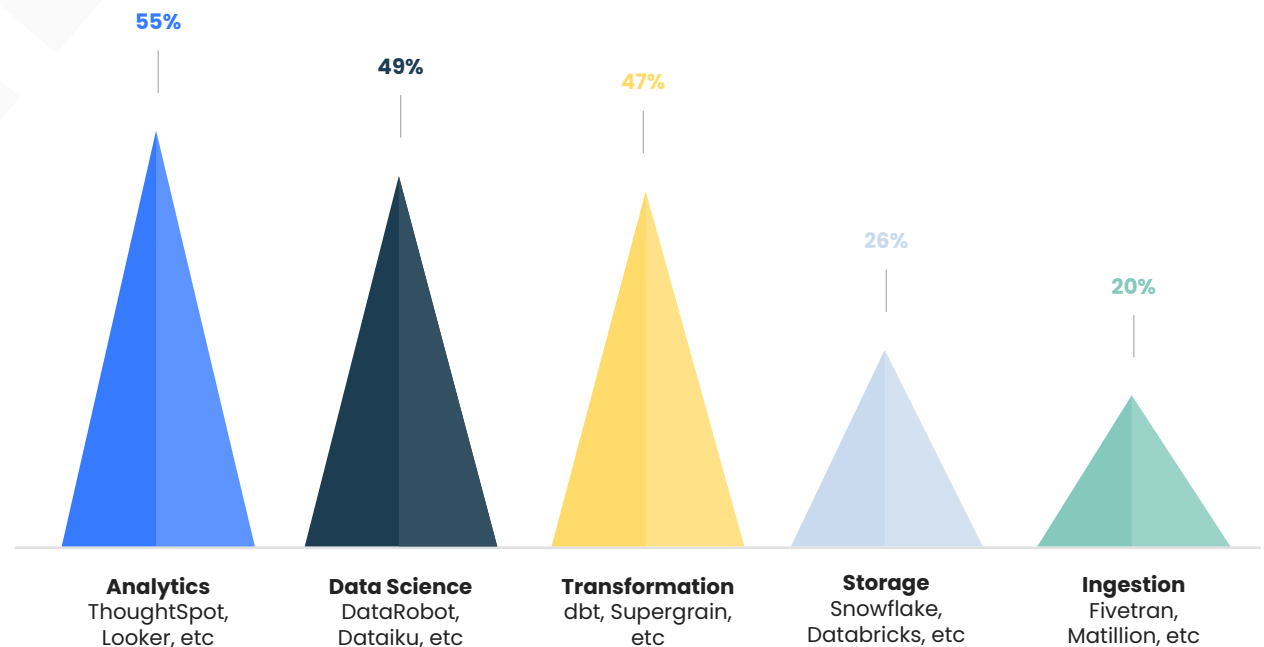| **Analytics** ThoughtSpot, Looker, etc	**Data Science** DataRobot, Dataiku, etc	**Transformation** dbt, Supergrain, etc	**Storage** Snowflake, Databricks, etc	**Ingestion** Fivetran, Matillion, etc
65%	**23%**	**8%**	**2%**	**2%**
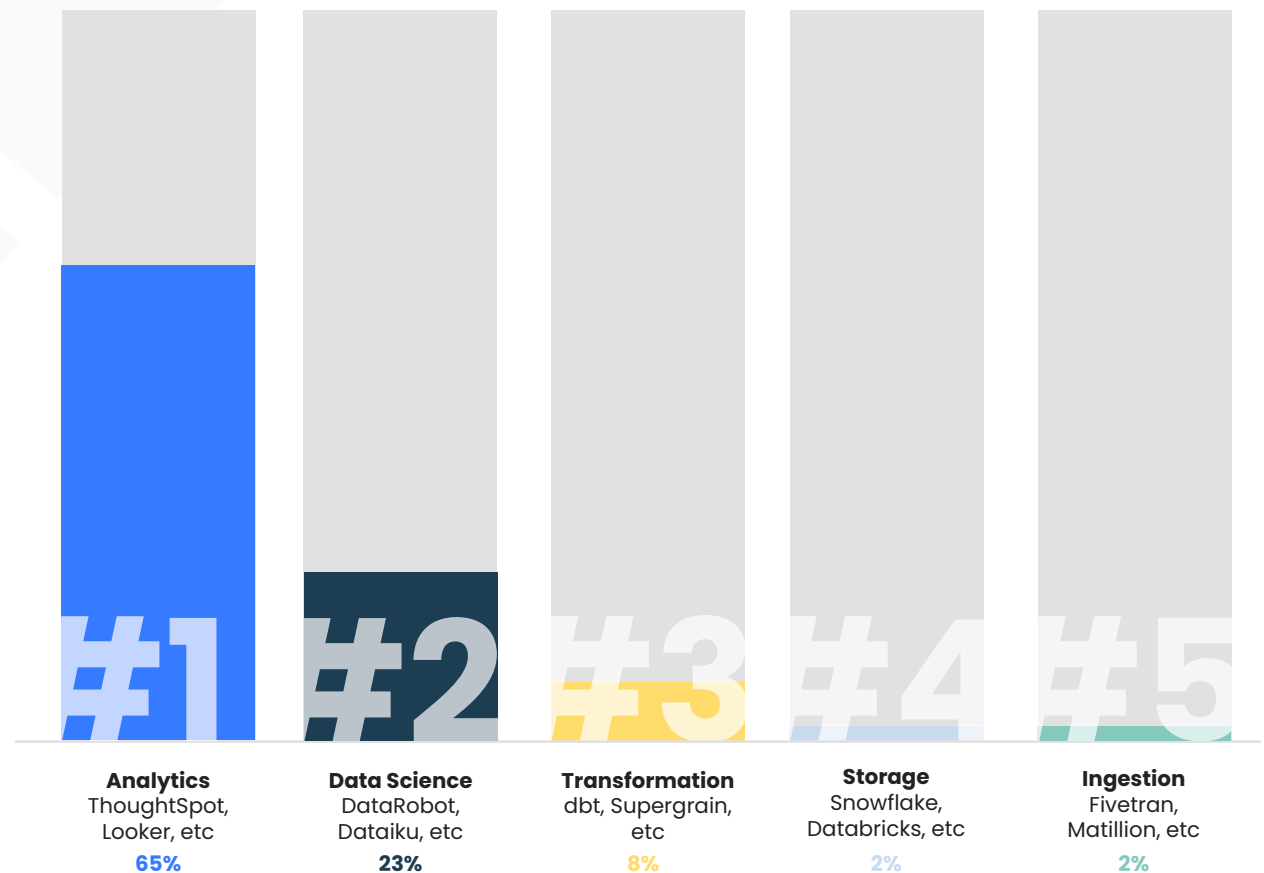
The modern data stack

Which tools have you already invested in?

The benefits of using specialized analytical tools can never be underestimated, and choosing the right one will of course depend on your goals, expertise, and budget. Naturally, we wanted to know what tools our surveyed product pros were using.

From our survey, it became clear that **analytics tools**, such as ThoughtSpot and Looker had been invested in the most, with more than half **(55%)** of those we surveyed stating they had done so. Storage **(49%)** and data science tools **(47%)** weren't far behind.

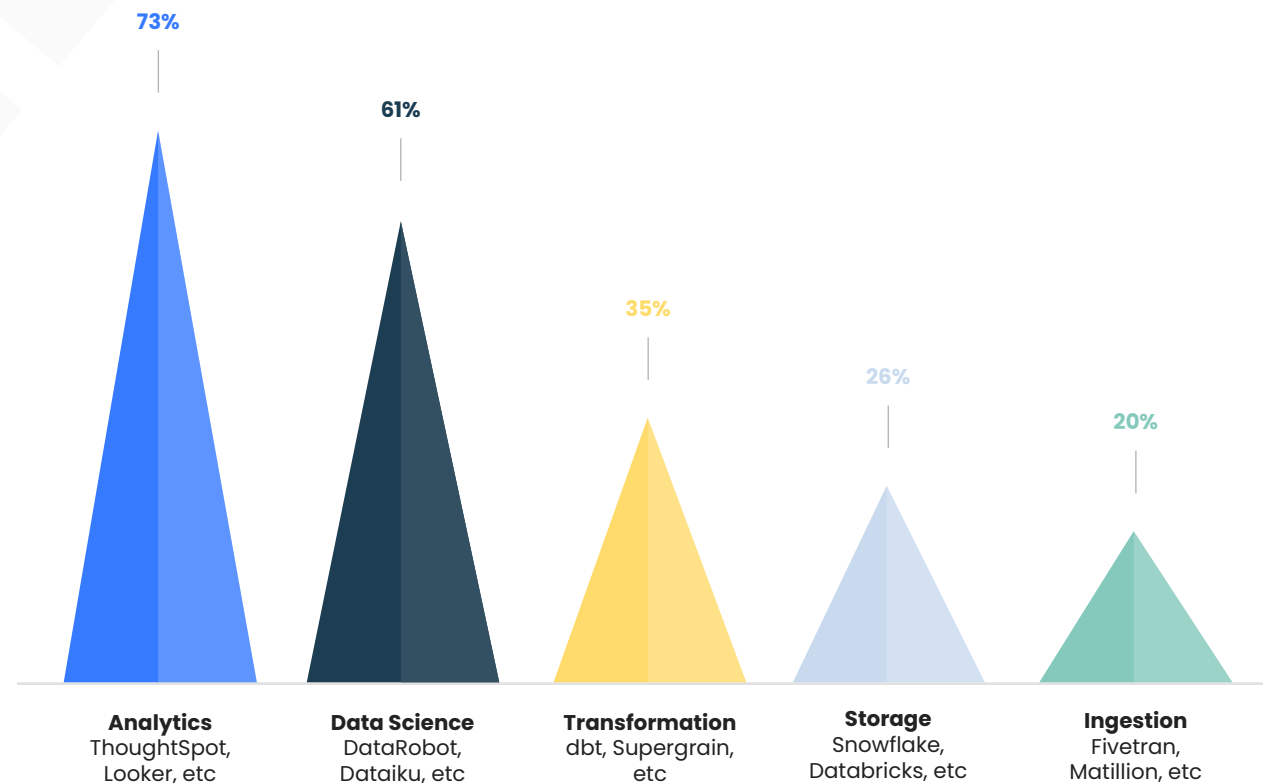| 55%	49%	47%	26%	20%
Analytics ThoughtSpot, Looker, etc	**Data Science** DataRobot, Dataiku, etc	**Transformation** dbt, Supergrain, etc	**Storage** Snowflake, Databricks, etc	**Ingestion** Fivetran, Matillion, etc

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The modern data stack

Which additional tools are you planning on investing in?

The most important layer based on where product people are planning to invest when it comes to the modern data stack is analytics - with 73% of our respondents revealing they are planning to invest in analytics tools the most. This is because analytics is where the UX differentiation (and revenue) can really happen.

Close to two-thirds (61%) revealed they would be investing in data science tools in the near future too.

73%
61%
35%
26%
20%

Analytics
ThoughtSpot,
Looker, etc

Data Science
DataRobot,
Dataiku, etc

Transformation
dbt, Supergrain,
etc

Storage
Snowflake,
Databricks, etc

Ingestion
Fivetran,
Matillion, etc

The modern data stack

How do companies that haven't really thought about data get started building embedded analytics solutions?

"Start with the basics - what is the crucial information you need from your business? i.e. How much capital are you investing and how much of it returns? Why is that happening? Going from basic questions and asking "why, why, why" will give you the necessary requirements to start answering those questions and to go after those. If you can't measure what you're doing, you probably aren't managing your business effectively."

Bruno Boeger, Product Operations Principal at Farfetch

"Figure out first the outcomes you would like to solve with an analytics solution for the end-users. Then, demo various solutions that may meet those criteria. Embedded analytics and BI is a critical function for modern SaaS companies. Next, I would instruct dev teams or contractors to create a POC and ensure it meets the users' needs and satisfies the business's requirements."

Michael D. Pierce, Director of Product Management at Munetrix

Part 4
UX FOR ANALYTICS

Analytics are the most important layer of the modern data stack; where PMs know they can differentiate, deliver value, and create revenue. So what should they be looking for in the UX for embedded analytics?

Here's what to think about...

UX for analytics

What makes a strong user experience?

Recognizing a good product design is simple, but what's not so straightforward is seeing what exactly makes a product effective in the eyes of its users.

Does it boil down to functionality? How simple the product is to use? The structure? Of course, the answer can vary, depending on the product. But the right analytics UX can improve the adoption of an application. It's not about driving adoption for an analytics application, but about how the right UX (including the right UX for analytics embedded in an app) improves outcomes.

Despite this fact, UX considerations often take a back seat as teams focus more on the engineering and analytics aspects. This then negatively impacts the operationalization and adoption of the final solution.

To truly adopt and utilize a self-service analytics solution, it's important to focus on the user experience from the get-go. Let's break down some of the key principles that can enhance the user experience and the adoption of embedded analytics solutions:

Getting the right data to the right user

The central goal of the PM/product builder, who wants to deliver a more engaging app that delights users and keeps them coming back for more (and paying for it) is to deliver the right data (and insights) to the right user, at the right time, in the right format. Keeping this goal at the forefront of the adoption of analytics solutions can ensure a more positive UX and user adoption by providing clarity on critical aspects, such as:

• Finding out who the users are.

• Discovering what data and insights they want.

• The timing and frequency of each set of data and insights.

• The format and interface that will fully satisfy any user requirements.

• The differences in the requirements amongst various user groups.

• Seeing the minimum requirements around data quality, model accuracy, etc.

• The tools/platform users are most familiar with, and the potential upskilling required.

UX for analytics

Adopting a user-centered design to enhance UX and adoption

User-centered design is focused on understanding and empathizing with users; their needs, challenges, and how they actually use the product. Developing this deep understanding of the personas and their journeys will enable solutions that truly resonate with the end-users. Solutions that will be much more likely to solve their challenges and positively augment their experience.

Focusing on how analytics can be a an integral part of your solution can help you deliver value to users, thanks to:

• Engaging users early enough that they become contributors to the overall design and vision of the product.

• Making the design iterative through incorporating incremental feedback from users.

• Helping the design team gain a stronger understanding of user personas, their needs, motivations, and challenges.

Enhancing adoption through user visibility

Embedded analytics isn't just presenting users with data. They can also interact with it. While others present a chart or report, that's just the starting point with an embedded solution. Users can continue to explore and drill down, which helps them gain better trust in the data. As a result, users will be more confident in their decision-making.

The trust that users have in the data and insights will greatly impacts the user experience and adoption of analytics solutions. Embedded analytics in an app makes that app stickier and drives adoption. Users themselves need to be able to use the analytics in order for analytics to help with adoption.

UX for analytics

Making interfaces consistent for seamless collaboration

Having self-service analytics with lots of scope for customization is great. However, sometimes the requirements to configure reports or to 'discover' subsets of relevant data can get overwhelming for users who aren't as tech-savvy. There needs to be a fine balance between simple, consistent interfaces vs. customizable, free form ones; and this will largely depend on the spectrum of users serviced by the analytics solution.

Users who are after specific 'ready-made' data need tailored interfaces that can provide exactly that. This needs:

- A strong discovery phase to engage users as early as possible to finalize the specific requirements. The fewer clicks to get to the information they're after, the better the user experience is likely to be.

- A consistent starting point enabling users to quickly reach views, reports, metrics, etc. that are most often needed by most users with options to dig deeper, if required, can be a good way to go.

- The ability to provide the same, consistent interfaces to different user groups, enabling smoother collaboration as everyone is looking at the same views, reports, metrics, etc. This can enhance the overall UX and increase the chances of users embracing the analytics solution.

- The ability to explore data beyond the surface level with an intuitive, self-service drill-down path that allows users to discover insights buried within the initial visualization.
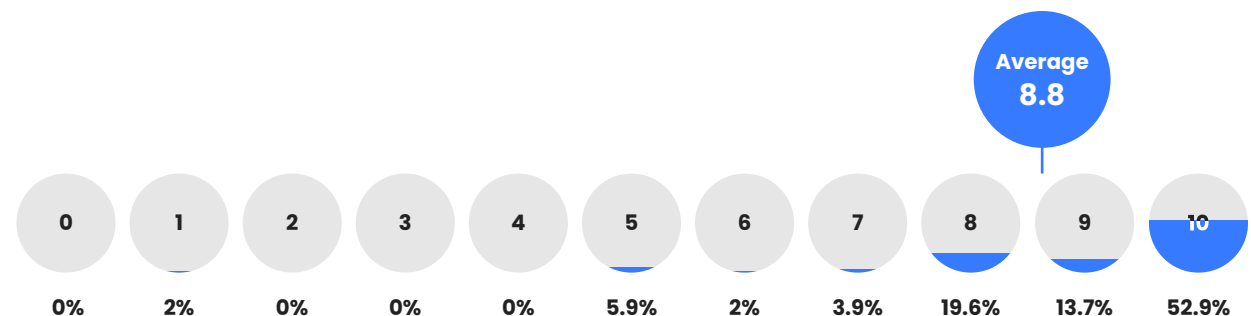
UX for analytics

Leveraging a unified UX to improve insights and actions from data

Having access to all the insights and data they need in one place is massively beneficial for users, as it saves them time by avoiding the need to switch amongst multiple applications/interfaces and enables them to operate more efficiently.

All too often, key info is spread out across multiple systems and platforms resulting in a poor UX and missed insights. So the most effective analytics solution must make it easy for the information required to be accessed, as this will reduce the number of times users have to refer to other sources for related information.

With intuitive interfaces that can consolidate data and reduce the time needed to spend on training, you'll be able to cut back on the overall training efforts by reducing the number of tools/platforms/applications that users need to interact with. Leading to a much more positive user experience that empowers you to get more value from your data and to take action on your insights.

Of those we surveyed, more than half (53%) agreed that UX for analytics is more critical than ever before in apps and products today.

Average
8.8

0	1	2	3	4	5	6	7	8	9	10
0%	2%	0%	0%	0%	5.9%	2%	3.9%	19.6%	13.7%	52.9%

UX for analytics

Is analytics UX more important in apps and products today than 5 years ago?

"Yes, absolutely. As SaaS matures and "software eats the world", the bar for a "shipped" product has continued to rise, including with respect to analytics UX. Users are expecting more and more polished experience as the number of SaaS tools expands and saturated niches."

Michael D. Pierce, **Director of Product Management at Munetrix**

"I don't think it's more important - it was always important, but I think the accessibility, awareness and conditions to implement it are higher today. We found ways to measure things we weren't able to measure (or had a lot of difficulties with), it's cheaper to do so, and it's way easier to integrate analytics into our products than it was before."

Bruno Boeger, **Product Operations Principal at Farfetch**

Clearly, optimizing UX for analytics has an abundance of benefits, but what are the most important considerations to keep in mind when optimizing? We asked our surveyed product pros this exact question.

Here's a handful of the responses we got >>>

UX for analytics

"Find that, middle-ground between keeping things simple and technical. Making too complicated a visualization and no one gets it. Make it too simple and then it's boring."

"Always keep ease of use at the forefront of your mind."

"Make things extremely engaging to keep users coming back."

"Ensure you're always considering usability and adaptability first and foremost."

"Everything needs to be very user-friendly."

"Do not overload with features and ensure easy to customize flows."

"Clicks to success and behavioral impact."

"Ease of use and speed."

"Make analytics accessible, understandable and actionable to all."

"User adoption and retention, plus engagement."

"Revenue, user adoption, retention, increased satisfaction."

"User should be able to get the insights they need quickly and seamlessly."

"Simple to use workflow, and quick time to insights."

"Event mapping and property naming consistency."

"The KPIs should be meaningful and users should be able to get to what they want."

"User friendly, useful and with minimum clicks arrive at the insights."

"Rich feature set, ease of use and speed."

UX for analytics

The expectations users have for analytics

Next, we took a closer look at what users are really looking for when it comes to analytics in your product.

What are the baseline capabilities users want when it comes to the analytics in your product?

Our surveyed product pros highlighted the ability to be able **to customize analytics for their business needs (78%)** as one of the most critical baseline capabilities users want from analytics in products. Just over half **(51%)** pointed out the ability **to intuitively find answers to their own questions** as another hugely important capability.

78.4% – **To be able to customize analytics for their business needs**

51% – **To intuitively find answers to their own questions**

45.1% – **To explore their data without constraints**

43.1% – **To visualize data in a cohesive way across all parts of the product**

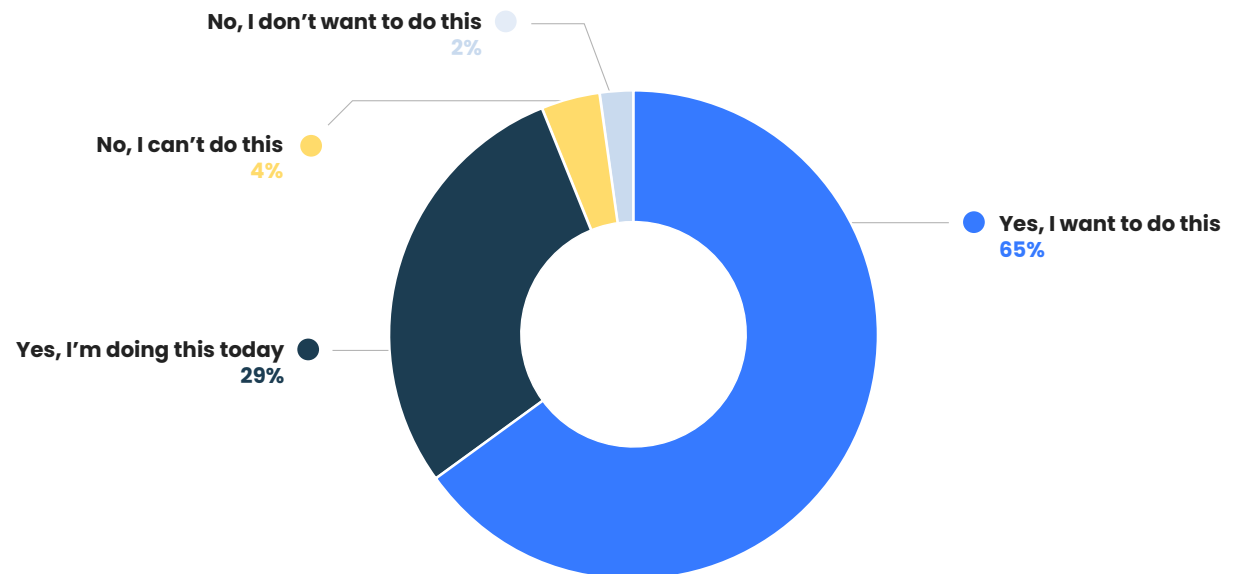**39.2%** – **To have access to real-time data**

35.3% – **To take actions directly from their embedded analytics solution to their other apps and tools**

UX for analytics

Would the ability to connect insights from your analytics into other apps be beneficial to your users?

Users are always looking for ways to make better, faster, data-driven decisions and embedded analytics provides the connection they need between insights and actions, all in one place. Clearly, this is extremely beneficial for users and our respondents agreed, with **65%** stating that they **want to be able to connect insights from their analytics into other apps.** Compared to just **2%** that didn't.

Close to a third **(29%)** of those we surveyed revealed they were **already connecting insights from their analytics into other apps.**

No, I don't want to do this
2%

No, I can't do this
4%

Yes, I want to do this
65%

Yes, I'm doing this today
29%

UX for analytics

Evaluative criteria

So, you've decided to embed analytics in your product - how do you know you've picked the right solution?

Well, this requires a thorough examination of the technology, a strong understanding of the expertise offered by the vendor, and knowledge of how to effectively implement a process to ensure success.

You need to start by examining the critical evaluation criteria of embedded/integrated analytics implementations. Time to break some of these down…

Personalization - Users choose the visualizations and reports most important to them, and re-arrange content into their preferred view.

Self-service - These are the core capabilities you will make available to your users, which may include dashboards and reports as well as the interactive and analytical functions they can perform.

Interactivity - Data Visualizations include bar charts, gauges, heat maps, sparklines, and geographic maps. Dashboards, both static and interactive, present multiple visualizations in a single view. Reports, both static and interactive, present tabular views of data.

Extensibility - Competing on analytics often means delivering unique functionality. Ensure you'll be able to meet any future requirement with a solution that can be extended utilizing open standards approaches.

Custom Code - For specific presentation needs, see how custom HTML, CSS, and JavaScript can be incorporated. For specialized functionality requirements, understand how custom-compiled code can be integrated into the solution.

Third-Party Charts - For unique charting requirements understand how third-party charting libraries and components can be utilized and embedded alongside "out-of-the-box" visualizations.

Scalability - Quickly deploy and scale an implementation that is aligned with your current technology stack. Be assured that you have the flexibility to shift as your technical environment evolves.

UX for analytics

Web Architecture – The best solution fits into your web architecture, minimizing the need to deploy proprietary technology, and utilizing well-known techniques to scale the implementation.

Deployment Style – The greatest flexibility comes from solutions that can easily be deployed on-premise at customer sites, hosted in your data center, and made available in the cloud such as Amazon Web Services and Microsoft Azure.

Flexibility – This is your ability to control the look and feel of your application, tailoring its functionality so every user has access to the capabilities they need. You need the flexibility to create a unique experience to stand out from the crowd, as well as the ability to future-proof your solution so you can tackle new requirements.
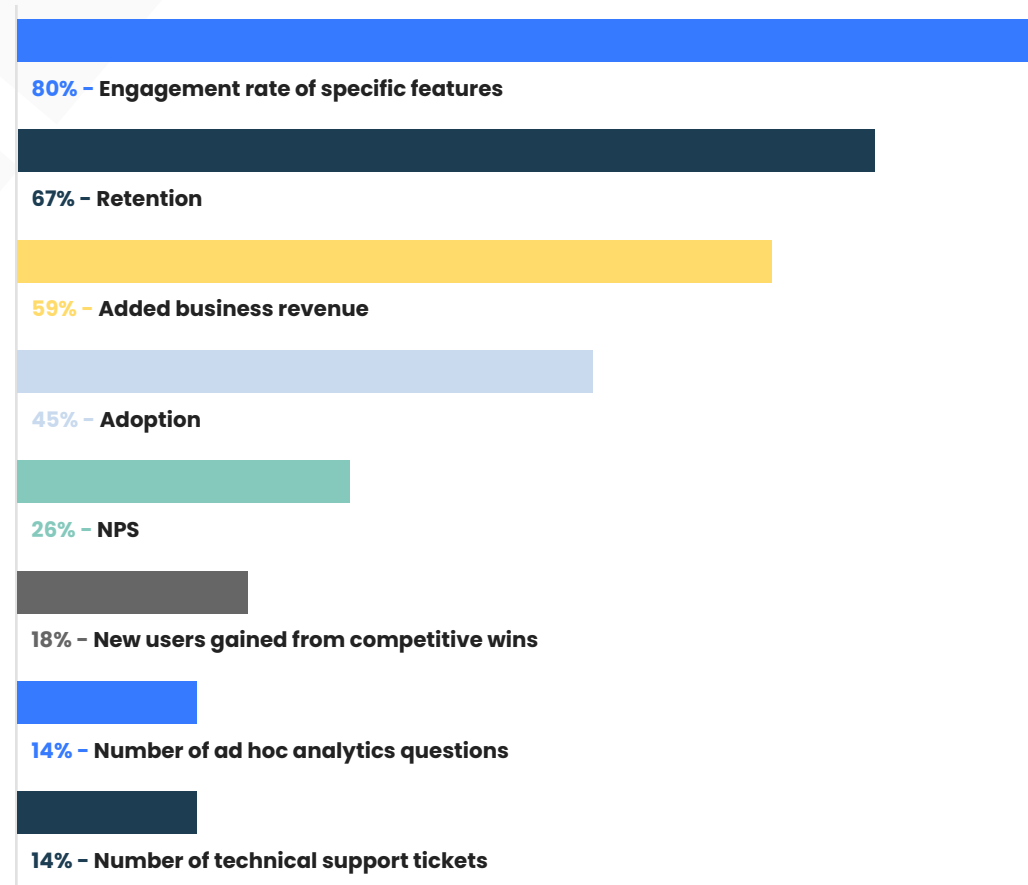
Part 5

THE IMPACT OF EMBEDDED ANALYTICS

In this section, we explore how product managers are measuring impact, what can be achieved through an embedded analytics solution, early indicators of user satisfaction, and the key goals PMs are reaching with embedded analytics...

The impact of embedded analytics

Measuring the impact

As apps continue to take over every industry, it's important to consider how exactly embedded analytics can drive RIO and have a lasting impact. But **how should a PM measure the impact of adding analytics to their apps and products?**

We asked our product pros to reveal how they were measuring the impact of embedded analytics, and **80%** confirmed they were focusing on **the engagement rate of specific features** to measure the impact of analytics.

80% - Engagement rate of specific features

67% - Retention

59% - Added business revenue

45% - Adoption

26% - NPS

18% - New users gained from competitive wins

14% - Number of ad hoc analytics questions

14% - Number of technical support tickets

The impact of embedded analytics

"Product managers should be spending 30 minutes every day looking into analytics about their product(s). Measuring the impact of adding analytics to an app or product involves tracking cohorts, tracking the overall change in # of sessions, time per session, total number of actions (Mixpanel), among other proxy variables."

Michael D. Pierce, Director of Product Management at Munetrix

What can be achieved?

Maximizing customer lifetime value (CLV) and reducing client churn

Embedded analytics can drastically improve the overall user experience. Users will no longer need to manually process data, instead, they'll get instant insights, right within their natural workflow.

A strong embedded analytics solution can tell users the best thing to do next. What more would a user want? It unlocks deep insights about their business, without having to cut through the 'data noise'. Users can focus on prioritizing what's most important and take action on the insights immediately.

Visual dashboards can then help those same users prove the value of your platform to all their internal stakeholders. Through collaboration and the sharing of data, your product can be made to be irreplaceable in the minds of entire organizations, lowering the risk for churn significantly.

The impact of embedded analytics

Monetizing data analytics and generating new revenue streams

Keeping users satisfied is of course crucial to maintaining the status quo of your product. But surely, you want to beat your status quo? Push past it and further grow your revenue too?

But how do you monetize data? Thankfully, there are multiple ways to generate new revenue off your analytics offering, such as:

- Offering dashboards in higher pricing tiers.

- Offering dashboards as an add-on in your pricing.

- Offering interactive liveboards as an additional service.

- Customized dashboards as an upsell.

- Offering access to Search as an additional service.

- Offering access to additional datasets as an upsell.

- White-label analytics for customers to build their own reports.

Gaining an advantage over your competitors

Users love data, so let this work to your advantage when it comes to your competitors. True, most of your competitors will likely already have analytics solutions in place, but you can go above and beyond them by:

- Implementing more collaborative analytics that are easy to share.

- Delivering stunning-looking dashboards that seamlessly match your platform's style. Encouraging users to see the brand as innovative and future-proof.

- Offering highly actionable analytics, allowing users to set up alerts or take immediate action with a single click.

- Offering interactivity that lets users go beyond predetermined, predefined paths to answer their own questions.

- Having the ability to quickly test and launch new features.

The impact of embedded analytics

What would you say is a key early indicator of user satisfaction with an analytics experience in a product or service?

Of course, being able to gauge how satisfied your users are with your analytics experience is crucial to reaching any of the goals above and more.

Here's a selection of the responses we received...

"Uplift in engagement and usage."

"Improvement in click-through rate."

"Retention and returning users."

"Increased user satisfaction."

"More actions taken after using a report."

"A significant increase in user adoption/retention."

"Increased user adoption, satisfaction and engagement."

"A significant increase in the speed in which users can get faster answers/insights."

"Reduced bulk data downloads."

"Retention and feature engagement."

"Increased usage, corrective actions based on these analytics."

"Added business value."

The impact of embedded analytics

"Some of the early indicators would be the number of views, the total number of actions for a given page (this can be set up in an embedded analytics platform very easily), time on a particular page (granted this needs to be cross-referenced to ensure that the session was active)."

"We've used an embedded analytics platform in the past to track the total number of actions for a given session, flow/funnel, or screen. This gives good insight into how "active" a user is with the product, which can translate to them getting value, i.e. a proxy metric to user satisfaction. These can also be correlated to the NPS or similar scores to correlate them."

Michael D. Pierce, Director of Product Management at Munetrix

"The engagement rate is a definite early indicator - people are able to interact with the data with ease, and with a low bounce rate. Generally, some software can suffer from a lack of engagement from the user, but if the data is relevant and easy to work with, you'll have good engagement with it."

Bruno Boeger, Product Operations Principal at Farfetch

The impact of embedded analytics

Over the past 12-18 months, have embedded analytics already helped you achieve one of your key goals? If yes, how?

We've gone over the benefits and advantages, but the proof as they say is in the pudding, and we wanted our respondents to let us know **how embedded analytics had helped them achieve their goals** – here's what they had to say:

"It's helped our users figure out the top-selling SKUs and helped them adapt accordingly."

"We've seen more user adoption and increased retention rate."

"Continually grew users from our analytics module."

"Users have access to up-to-date data and can manipulate any analysis so that they can quickly gain deeper insights."

"Yes, clarifying usage and engagement metrics to evaluate opportunities."

"Yes, testing for increased retention has proved positive."

"Yes, more user adoption and increased retention rate."

"We have managed to add more users."

"A big improvement in productivity and efficiency."

"Reduced the load on the data servers for excessive downloads to get the answers."

"Yes, we managed to exponentially grow the users of our analytics module."

The impact of embedded analytics

Yes, we grew the users of our analytics module by four times the amount."

"Yes, clarifying usage and engagement metrics to evaluate gaps/opportunity areas."

"Teams can self-serve troubleshooting issues."

"It already helped improve productivity and efficiency, and reduced redundant data operators."

Those that hadn't achieved their goals mentioned a few reasons why, namely that they "hadn't had time to test yet", "they don't have the full solution in place yet", or they "only released recently."

Part 6

CONCLUSION

Here are your stat highlights:

- We asked our respondents whether they **already offered embedded analytics in their products** and **55%** revealed they **did.** Highlighting how the value of embedded analytics is growing but there's still some development to be made.

- But what are the challenges stopping orgs from building an embedding analytics solution? We dug a little deeper and our respondents highlighted **budget constraints (47%)** as one of the biggest, with **attracting users, keeping up with feature requests, and slow time to market** coming in equally second at 39%.

- We asked our respondents to let us know about the positive outcomes embedding analytics would have in their app, product, or service. Close to half **(44%)** of respondents think **embedded analytics would boost revenue**, with just over a quarter **(26%)** citing it would have a **positive effect on engagement.**

- **65%** of our surveyed product pros ranked **analytics** as the most critical component of the modern data stack.

- From our survey, it became clear that **analytics tools,** such as ThoughtSpot and Looker had been invested in the most, with more than half **(55%)** of those we surveyed stating they had done so. Storage **(49%)** and data science tools **(47%)** weren't far behind.

- Interestingly, our respondents heavily planned in investing in **analytics tools** the most, with **73%** agreeing they were planning to do so. Close to two-thirds **(61%)** revealed they would be investing in **data science tools** in the near future too.

- Of those we surveyed, more than half **(53%)** agreed that UX for analytics is **more critical than ever before in apps and products today.**

Here are your stat highlights:

- Our surveyed product pros highlighted the ability **to be able to customize analytics for their business needs (78%)** as one of the most critical baseline capabilities users want from analytics in products.

- **65%** of respondents stated that they **want to be able to connect insights from their analytics into other apps.** Compared to just **2%** that didn't.

- We asked our product pros to reveal how they were measuring the impact of analytics, and **80%** confirmed they were focusing on **the engagement rate of specific features** to measure the impact of analytics.

- Of those that had a solution in place, **61%** stated that embedded analytics had directly **resulted in increased engagement, with revenue (57%)** following close behind.

Conclusion

It's clear we're moving past the traditional operating reports and dashboards and embedded analytics is experiencing a wave of innovation. It's quickly becoming the key to enhancing the product experience for users, helping orgs stand out in the marketplace.

Embedded analytics is creating new opportunities to increase ROI, innovate, disrupt, and drive meaningful change. There's perhaps never been a more perfect time to invest in the right analytics offering to stay ahead of user demands and create products and services that your users will love.
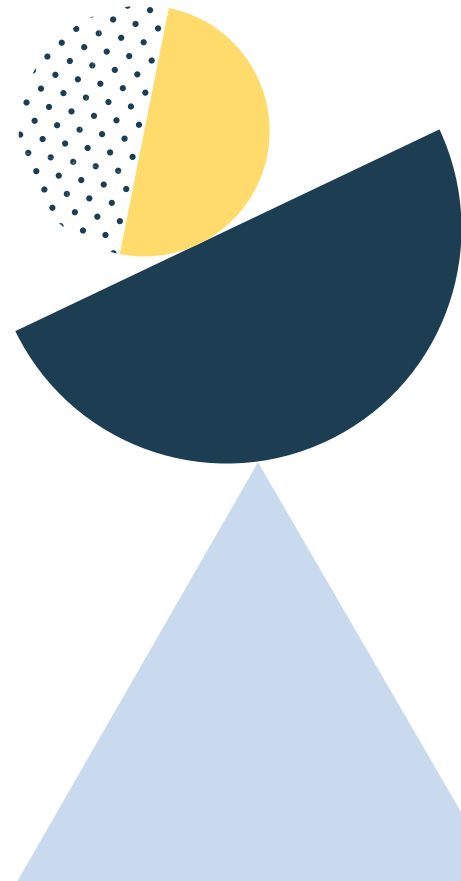
Choose ThoughtSpot Everywhere

ThoughtSpot Everywhere is an embedded analytics offering that gives granular, customizable access to the entire ThoughtSpot platform.

With ThoughtSpot Everywhere, Product Leaders and Developers can easily design a consumer app-like experience to create embedded applications that are dynamic and engaging. ThoughtSpot Everywhere delivers a simple, flexible, and modern search experience powered by cloud data to everyone in an organization and broader ecosystem by embedding Search & AI into their app, portal, or product.

ThoughtSpot
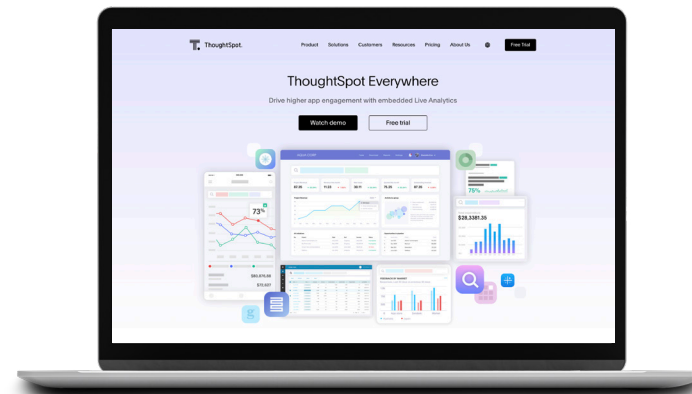
Thank you

A huge thank you to all those that took part in the survey to offer up their unique insights - we look forward to seeing what the future holds for embedded analytics.

If you want to get involved with the discussion, you can **join our growing slack community,** and sign up for a **PLA membership plan.**
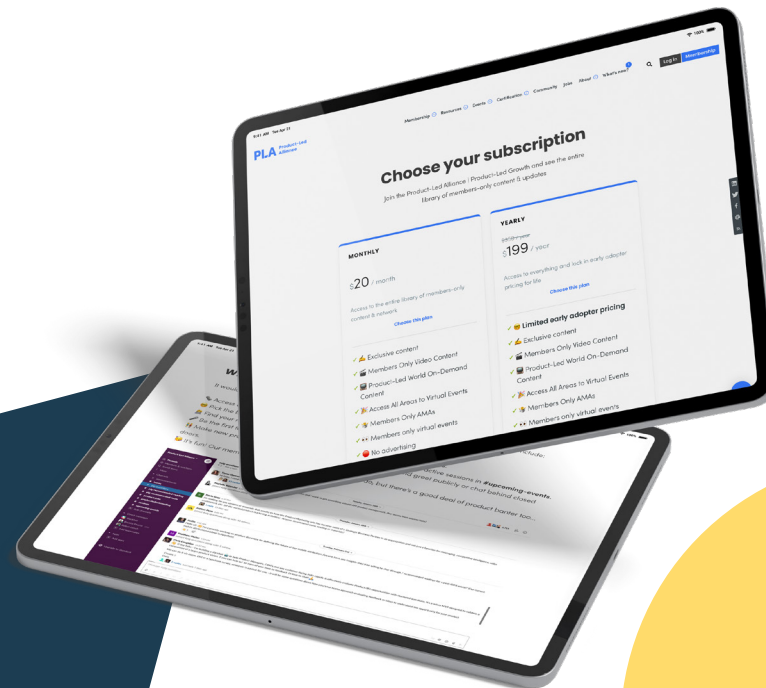
Part 7

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Vika is a Director of Product Marketing at ThoughtSpot, leading customer marketing as well as messaging and positioning for ThoughtSpot's embedded analytics platform, ThoughtSpot Everywhere. Before joining Thoughtspot in 2019, she focused on data integration solutions as a Product Marketing Manager at Oracle. Vika holds a Master in Communication Management from the University of Southern California.

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Graphic Designer

Faye is our graphic designer and looks at all our design requirements. She's responsible for the layout and visual elements in this report and is always happy to hear your thoughts!