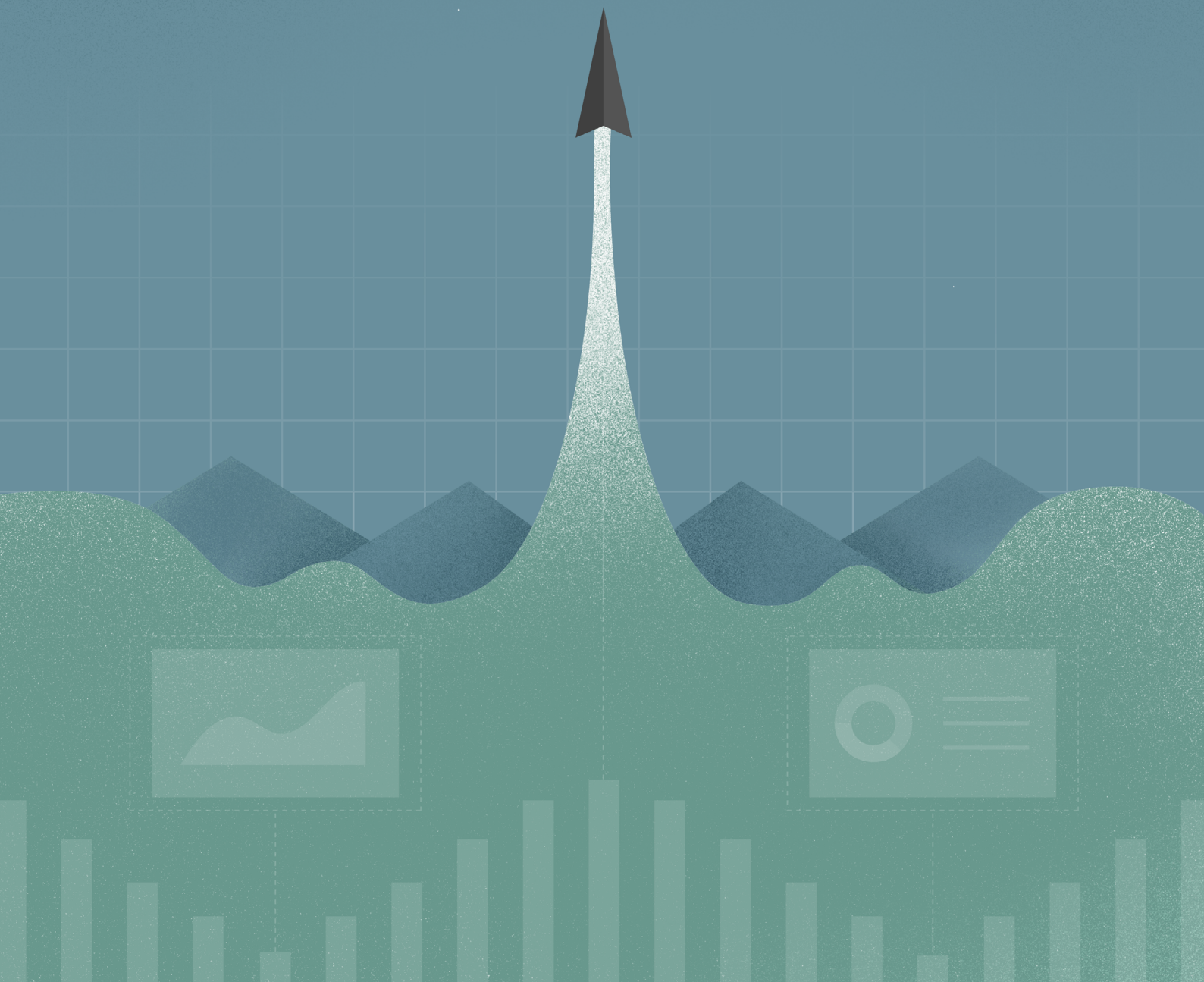# The Data-Driven Product Manager

8 Tips to Help Smart Product Managers

Make Data Work For Them

Are you tapped into all the opportunities of this data-driven world?

Today, 90% of companies recognize being data-driven as a top priority, *yet only 25% make decisions predominantly based on data.* These companies are now turning to their favorite tools and products to bridge that gap. So the onus is on you, dear Product Manager (PM), to create offerings that act as must-have enablers for your customers. And you need data to do this.

The benefits of leveraging data are irrefutable – developers and PMs are using data to grow customer satisfaction, make products their better looking, and gain competitive advantages.

The benefits of leveraging data

Grow customer
satisfaction

Make products more
visually appealing

Gain a competitive
advantage

And yes, these benefits do outweigh the perceived risks of data utilization – some know that using data at scale and democratizing access to it through their products bears its own risk; if your tech team has a clear vision of user engagement, then you no longer act as a gatekeeper. If your clients have this same access, then you'd better be sure that you're delivering on your sales promises.

But running away from data only leads to lost opportunities. Every. Step. Of. The. Way.

Conversely, data democratization allows PMs to demonstrate the value of data more widely, strengthen user engagement and, ultimately, push out stickier features.

This book provides you with actionable insights that will help you succeed in this data-driven world.

→   *Learn how to apply the power of data for better decision-making.*

→   *Use data to identify (and bridge) the gap between the user problems you're looking to solve, and the resources you have at your disposal.*

Data is the **key to solving many critical PM challenges** – so, read on, and we hope that by the end of this book you're equipped to create something that literally no other team can

I am often asked to speak to PMs about how data can drive better decisions and help companies get an edge over their competitors. But here's the secret: Data alone is meaningless. You can collect all the data in the world, but if you don't know how to analyze and apply it purposefully, then you have wasted your time. In this practical and accessible book, you will learn not merely how to gather data, but how to use it to build a killer, data-driven product.

Carlos Gonzalez de Villaumbrosia
CEO, Product School & Author of The Product Book

PRODUCT SCHOOL

A Note From Our Co-Founder

Being a CPO, I know how difficult it is to prioritize your roadmap. This is especially true for all product leaders as product is driving growth more than ever. Speaking with my customers and partners over the years, I've come to realize how much of a gold mine data can be -- it's key to finding new revenue streams, ideas, and growth. To put things simply, you have 2 scenarios to leverage:

→ *Internally, using product analytics to better understand where you should focus your efforts and make an impact - improving your teams' focus on what matters.*

→ *Externally, turning your product data into a compelling reporting experience for your users to help them make decisions directly within your software - maximizing customer retention & your revenue potential.*

But we have to be honest with ourselves: our teams and our customers aren't all data-savvy and that's not going to change overnight. People are asking for actionable insights, not complex data. If you're able to craft easy-to-access, easy-to-use, and easy-to-share analytics experiences, you'll become a powerful partner: you'll uncover insights for your internal stakeholders to drive the product roadmap and surface untapped growth opportunities, and you'll become a strategic insights provider for your customers by giving them access to an embedded reporting experience.

Creating these best-in-class experiences doesn't have to be a lonely crusade; it takes a village to make them right. The perfect recipe for success? Building and strengthening your core expertise, while leveraging outside expertise to help you get to the next level.

This book was written to help you do just that. I hope you like it.

Charles Miglietti
CEO & CPO, Toucan Toco

In collaboration with:

PRODUCT SCHOOL

With special thanks to:

SHERLOCK

ind:cat:ve

Appcues

ProductPlan

Roadmap

Three Ways Data Will Transform How You Manage Products

Will you become a data provider or a must have decision making tool?

Raw, low
value-added data

vs

Must-have, actionable
in-product insights

A common saying goes that **9 out of 10 startups fail to get their products out of the gate and achieve the level of adoption they initially expected.**

While the exact number here is up for debate, the core idea remains relevant in today's rapidly growing (and increasingly competitive) software landscape. In 2019 alone, 553 startups failed despite total funding of $1.9 billion.

Much of this can be attributed to a lack of both actionable insights and understanding of customer needs. That's why PMs need exact, up-to-date, and dynamic customer data… so that **their offerings aren't just a "shot in the dark," but instead align perfectly between need and delivery.**

Take the example of an employee time & attendance app. You could build a simple automation tool that lets your employees log in from their smartphones, send the data to payroll, and maintain raw data records.

Orrrrrr you could serve up analytics insights that transform the raw data from employee activity to add value to managers' lives and positively impact organizational efficiency.

Data is your key to understanding core user problems and optimally mobilizing the resources you have at your disposal to solve them.

There are several parts to this strategy – in the next few chapters, we explore how PMs can leverage data to solve three key challenges and objectives:

Supporting core businesses - by finding hidden pain points, prioritizing development, and communicating the value proposition

Delivering products efficiently - by managing costs and timelines, and measuring user impacts

Creating additional value for users - by arming product champions, empowering users with data, and accelerating release timelines

Let's Get Rolling!

Relentlessly Focus on Your Core Business

The value that your core business delivers is inextricably linked to its demonstrable representation. To put that simply: using data to understand customer/user sentiment, un-earth their latent needs, and clearly communicate value through democratized dashboards is as important as developing the product itself.

> **For any modern SaaS business – especially those with a product-led motion – product engagement is core to success. This means that product engagement data must sit at the center of the operation, be used to prioritize a product roadmap, and drive actions across the entire go-to-market team. Who needs a push? Who's ready for a conversation? Who's at risk? All of this is driven by product engagement data.**

Derek Skaletsky

CEO, Sherlock

SHERLOCK

If it wasn't already abundantly clear, PMs must ensure that data is the bedrock of their business. But how?

1. Find the Hidden Pain Points That Motivate Your Users

The average SaaS product experience is far from experience-centric – only 37% of B2B SaaS products boast a frictionless sign up journey, and a similar number don't greet new users with a welcome screen. And when experience isn't central to your product? Say goodbye to user engagement.

PMs can utilize data to identify two distinct types of user pains:

1   Experience **bottlenecks** that are hurting engagement and may be compelling users to switch to a competing product

2   Product **possibilities** that users may or may not be aware of, where a competing player might have a first-mover advantage

You can initiate a culture of feedback where users regularly answer a Net Promoter Score (NPS) survey, giving you insight into how likely they are to recommend the product to others. This unearths valuable information around customer loyalty, helping you nip churn risk right at the bud.

Apart from NPS, analytics can help map and mine product usage patterns to reveal the most critical areas of engagement, bottlenecks, and untapped possibilities.

2. Make Smart Decisions to Prioritize User Jobs

High Impact

Must Have

Wow!

Expected   **Unexpected**

Who Cares?

Neat

Low Impact
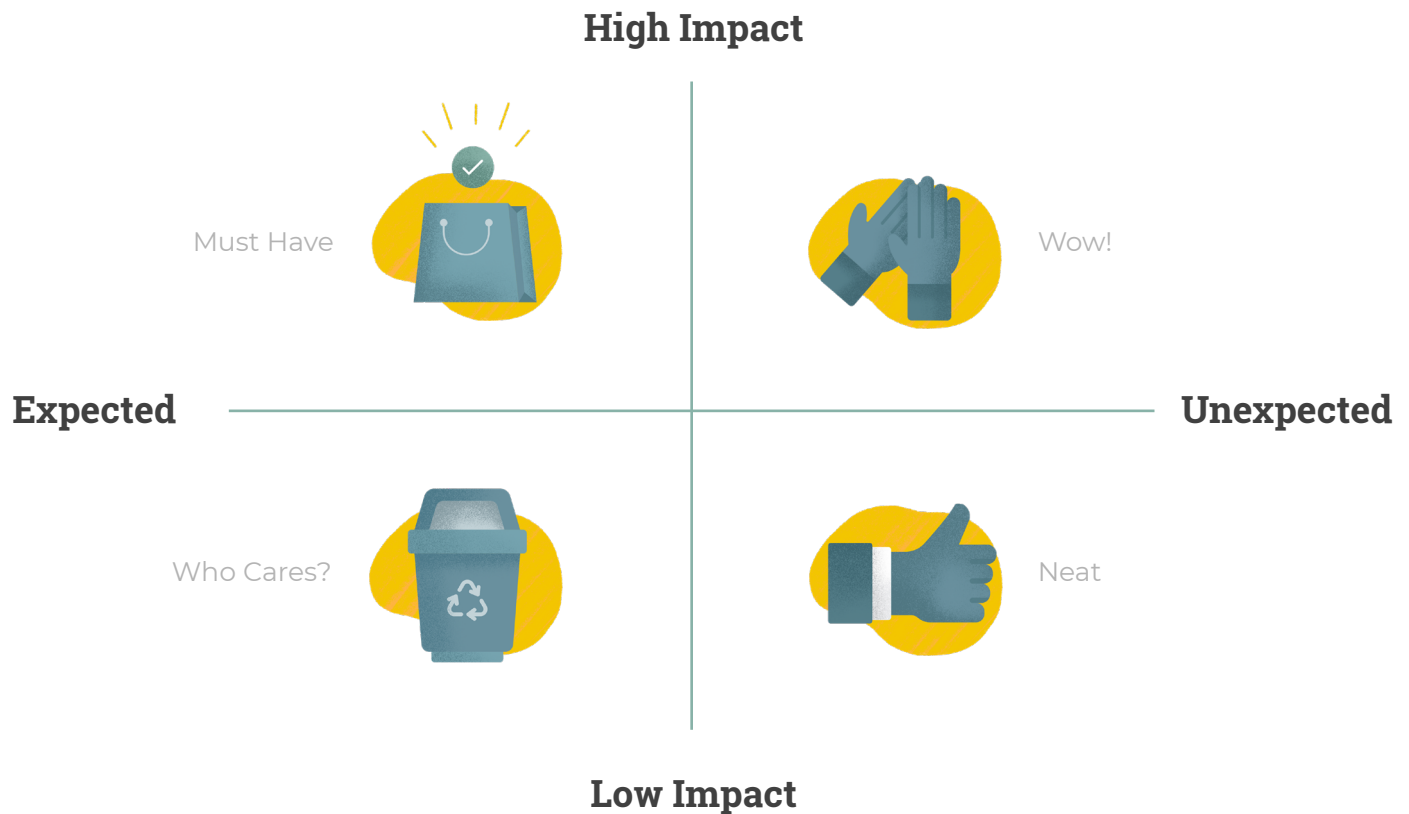
Once you've identified your users' primary pain points, prioritizing them into a coherent roadmap is the next big ask.

Research from our friends at ProductPlan reveals that the #1 challenge for PMs is product development prioritization and sprint planning, which is virtually impossible to do without data.

The absence of sufficient insights and a clear roadmap direction lead to 35% of PMs having to deprioritize their backlog every week.

Advanced product analytics help streamline roadmap prioritization, highlighting which features have the biggest impact on the customer journey and are, therefore, the most urgent priority.

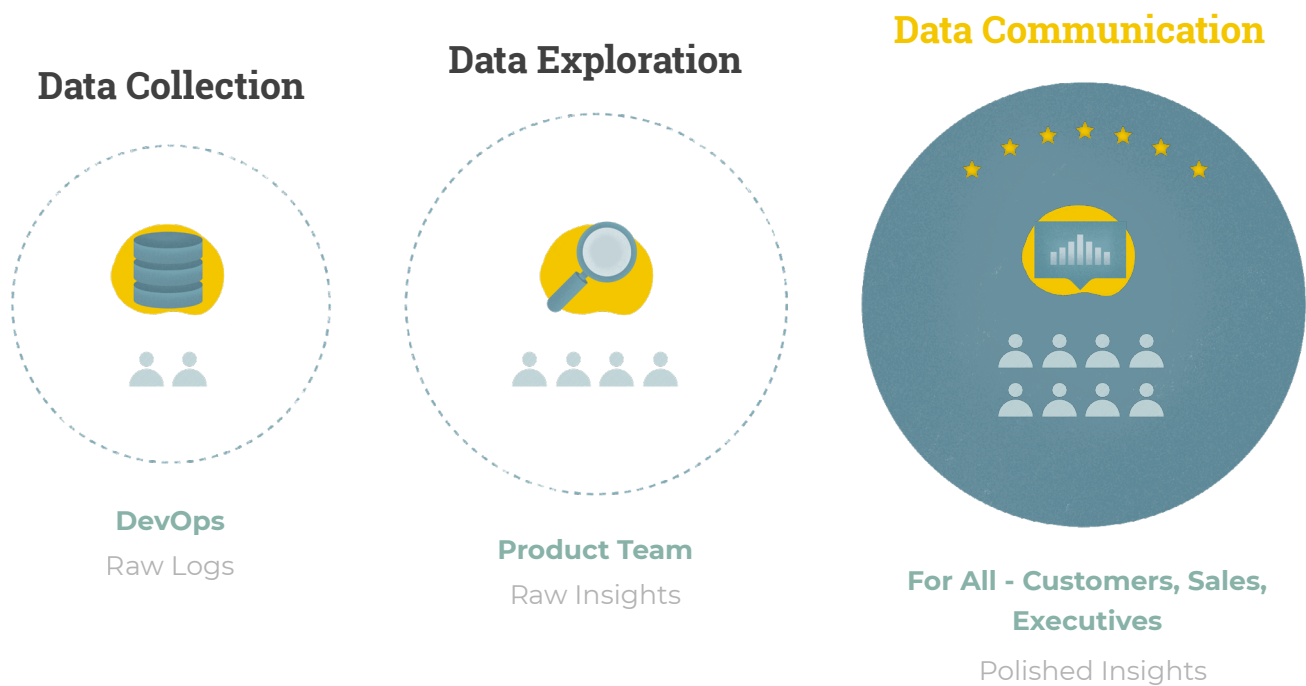**By correlating meaningful product analytics KPIs, PMs can recreate the user journey to identify what intervention is required** (and at which step). Equipped with the necessary interventions and pain points to address, PMs can:

- ✓ Start with unweighted scorecards that assign unquantified KPIs like value, cost, complexity, risk, effort, etc., to each feature

- ✓ Bolster this with a weighted scorecard where user, customer, and developer feedback informs a percentage score for each KPI

- ✓ Meet with stakeholders on the value chain (customer success, deployment teams, etc.) to confirm the scorecards and finalize prioritization

Right now, 7 in 10 PMs feel unhappy or just about average with their planning and prioritization initiatives. Data can help improve this and strengthen focus on the business.

3. Become a Data-Driven Communicator to Influence and Inspire

Data Collection

Data Exploration

Data Communication

DevOps

Raw Logs

Product Team

Raw Insights

For All - Customers, Sales, Executives

Polished Insights

Analyzing and assigning weightage is only one first step towards making data work for you.

PMs must effectively communicate roadmap details and the "why" behind it all to get buy-in from other key stakeholders along the value chain.

A good communicator is someone who, with a keen focus on business growth, can convince others of roadmap priority, drive speedy development, and enable on-time delivery.

It's no surprise, then, that the report we mentioned above found communication to be the #1 skill for Product Managers. Yet 4 in 10 PMs feel just average about the efficacy of their communication process, which is often attributed to varying levels of technical knowledge and data literacy amongst product teams.

Despite a growing appetite for data, pure-play data science isn't something that piques everyone's curiosity. That's probably why HBR found a gap between popular opinion and actual implementation: 86% of enterprises agree that it's "very important" to extract value from existing data resources, but only 30% believe that they've been "very effective" in achieving this.

To avoid confining product data to an ivory tower, PMs need to communicate via **data storytelling** by:

Preparing the UX for non-technicals by complementing concrete data with DataViz best practices

Visually representing the roadmap for faster adoption from sales, marketing, customer success, and other teams

Getting buy-in for roadmap priorities from (even non-technical) senior management by narrativizing the product's value proposition

Personalizing data stories to align different teams and stakeholders towards a shared goal

Offering a sneak-peek of data capabilities so that customers and prospects "crave" the insights that only you are capable of delivering

Deliver the Product Efficiently

The three tips we've covered so far will reinforce your product's foundation, ensuring that you start off on the right foot before commencing delivery.

But even the best products need **continual adjustment and optimization** across the delivery lifecycle to hit that sweet spot and attain true stickiness.

Data can help you act on your roadmap, make the best use of your available resources (the unique strengths and expertise of your team), and build an impactful product. Here's how:

4. Deliver Your Product On Time and Under Budget
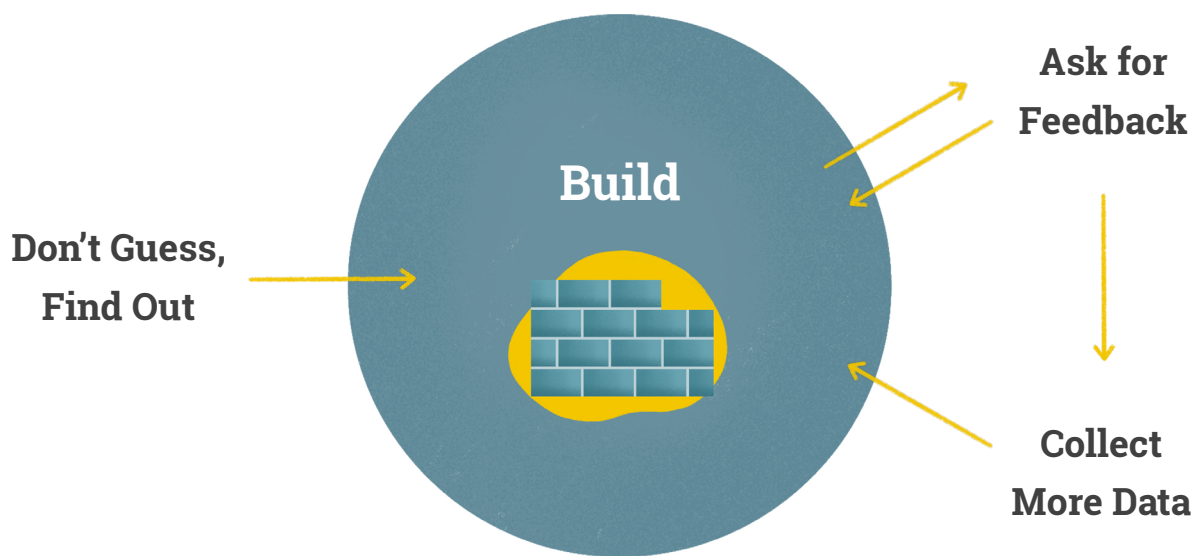
Delayed release and budget overruns are all too common for product teams, and this can have pretty severe long-term impacts.

In fact, in 2019 Gartner found that 45% of product launches are delayed by at least a month, from which many fail to meet internal targets within a year. That number is only expected to increase (quite substantially) in 2020.

A root cause of this trend are tireless attempts at building a "perfect" solution, which often lead to unrealistic, unattainable targets. And yes, of course we'd love to fine-tune and polish a product for years til we achieve something close to perfection, but that would stretch resources thin and shrink our chances of success.

Instead, data-driven PMs must redefine their vision of the "best" product – as an ROI ratio of impact vs. costs. A data-driven impact-cost balance can help you optimize your number of iterations, thereby **pushing for quality without compromising your release schedules.**

A crucial data metric to monitor here is burn rate – the speed at which a company or a team spends the capital or "resources" on hand. You can modify the burn rate KPI using a burndown chart to plot capacity utilization during a sprint, mapping ideal effort hours against your actual remaining efforts. This can significantly help with prioritization and planning (which, as we know, is a major headache for most PMs...see tip 2).

Here are a few tips for PMs looking to use burndown charts for effective product delivery:

Use dedicated burndown charts for costs and developer effort/time

Replace costs/ time/ efforts with the user pain points a developer is working on; this would better capture multi-tasking hours

Count the number of tasks and map it across sprints to get a more accurate view of productivity, apart from simply the number of hours put in

Using data analytics in this way enables better planning of the delivery lifecycle and more accurate, proactive forecasting of any delays or budget overruns. Data is particularly relevant for the newly emerging "Growth Product Manager." Cost and time pressures have given rise to a whole new breed of PMs who are squarely focused on pushing internal goals. They often work hand in hand with "core" PMs to balance customer needs with business outcomes. Eric Keating, the VP of Marketing at Appcues, helped us explain this trend in detail:

Product teams are inheriting commercial responsibility at a rapid pace. This new commercially oriented reality poses a challenge for traditional product organizations — who, while highly-skilled at identifying and solving customer problems, building long-term customer value, and working closely with engineering to deliver on a well-defined product roadmap — are not used to carrying a quota or focusing on short-term business outcomes.

In response, this role of the growth product manager has emerged. Growth product managers are peers to traditional (or core) product managers. But rather than owning a specific product, the growth PM is focused on improving a specific business metric or commercial goal.

Eric Keating
VP Marketing,
Appcues

Appcues

Now growth PMs and core PMs aren't necessarily two separate people!

You can have a single owner with two lines of responsibilities, geared to cover the entire breadth of desired outcomes. So, whether you employ a growth PM or adopt a growth PM mindset, you need data to measure whether the product is reaching your ROI goals.

Eric added that "…that metric or goal could be new user activation, free to paid conversion, adoption rate, retention, or expansion, to name a few. To improve the metrics they own, growth PMs typically rely on a series of short-term experiments to incrementally improve and increase efficiencies throughout the product experience."

You can learn more about the role of the Growth PM here.

5. Measure Your Impact to Make Adjustments in Real Time

**Where we
want to be**

**Where we
are now**
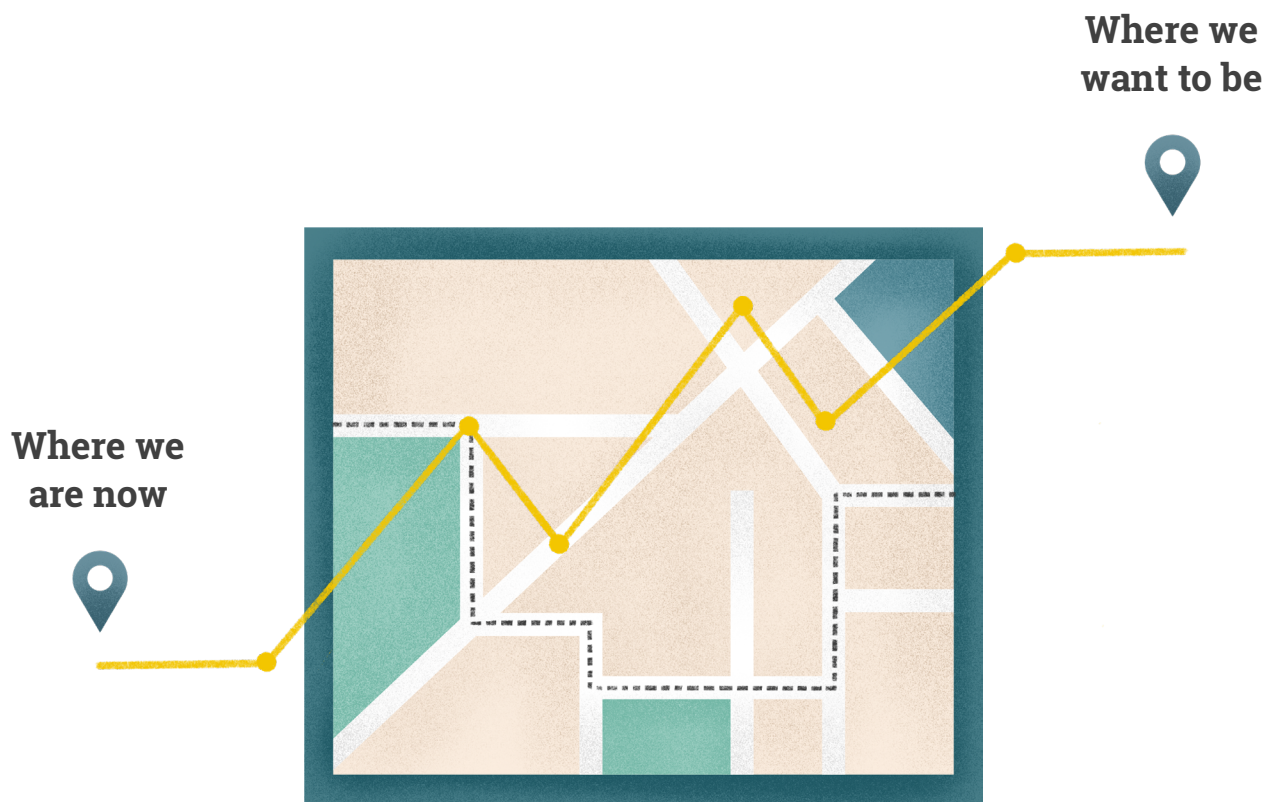
A sustainable delivery plan draws clear lines between development effort and the impact that every change/feature has. Unfortunately, PMs often shy away from analyzing results in detail because:

→ A busy roadmap and consecutive changes make it difficult to collect accurate data

→ There is fear that quantifying impact could lead to more challenging targets

→ There is no visibility into the ideal impact KPIs and how to measure them

The last point is the most common reason for putting change impact analysis on the backburner. However, the failure to analyze user impacts can confuse feature prioritization plans later down the line. PMs will struggle to allocate the right resources in the right direction without an accurate and complete understanding of the WHY behind it all.

Some researchers have even come up with tested models for change impact analysis for software product lines (SPLs) – this underscores the severity and urgency of the problem!

Efficient delivery implies that every step and activity brings value, either for the business or the user (preferably both). You can't achieve this without measuring impacts and redirecting product efforts accordingly. Some of the most easy-to-measure impact KPIs are:

→   Increases in usage/engagement

→   Revenue gains from existing customers

→   Referrals leading to new customer acquisition

→   Improvements in NPS scores

→   Upticks in organic PR (social media mentions, analyst coverage, etc.)

These metrics aside, you can also track long-term KPIs like increased market share, where the release of a particular change/feature may have spurred an upwards trend. It's equally important to listen to negative signals – a negative response to a feature change indicates a gap where, in some scenarios, a PM might be on the wrong track entirely.

Impact data helps to realign efforts dynamically along the SDLC and keep the delivery aligned with user needs.

Leverage Data to Create Value for the User

In a world where every business is eager to become data-driven (but most lack the technical know-how to do so), it's not a bad idea to seek to position your offering as a "data product."

The best part about being data-driven is that, when done effectively, you've the ability to **generate value both upstream and downstream.**

Using data to strengthen the core business and deliver products efficiently, PMs can optimize effort utilization and drive their bottom line. In the downstream, data helps to attract, convert, engage, and retain customers by complementing the product's primary value proposition.

Data-driven product management is now at the foundation of most successful products. Great product managers combine quantitative data with qualitative customer insights to make meaningful decisions. Data is not only about setting the right priorities but about measuring the success of those priorities – the outcomes. The insights provided here help you do just that.

Jim Semick
Co-Founder & Chief Strategist, ProductPlan

≡ProductPlan

6. Arm Your Champions to Defend Your Product Proposition
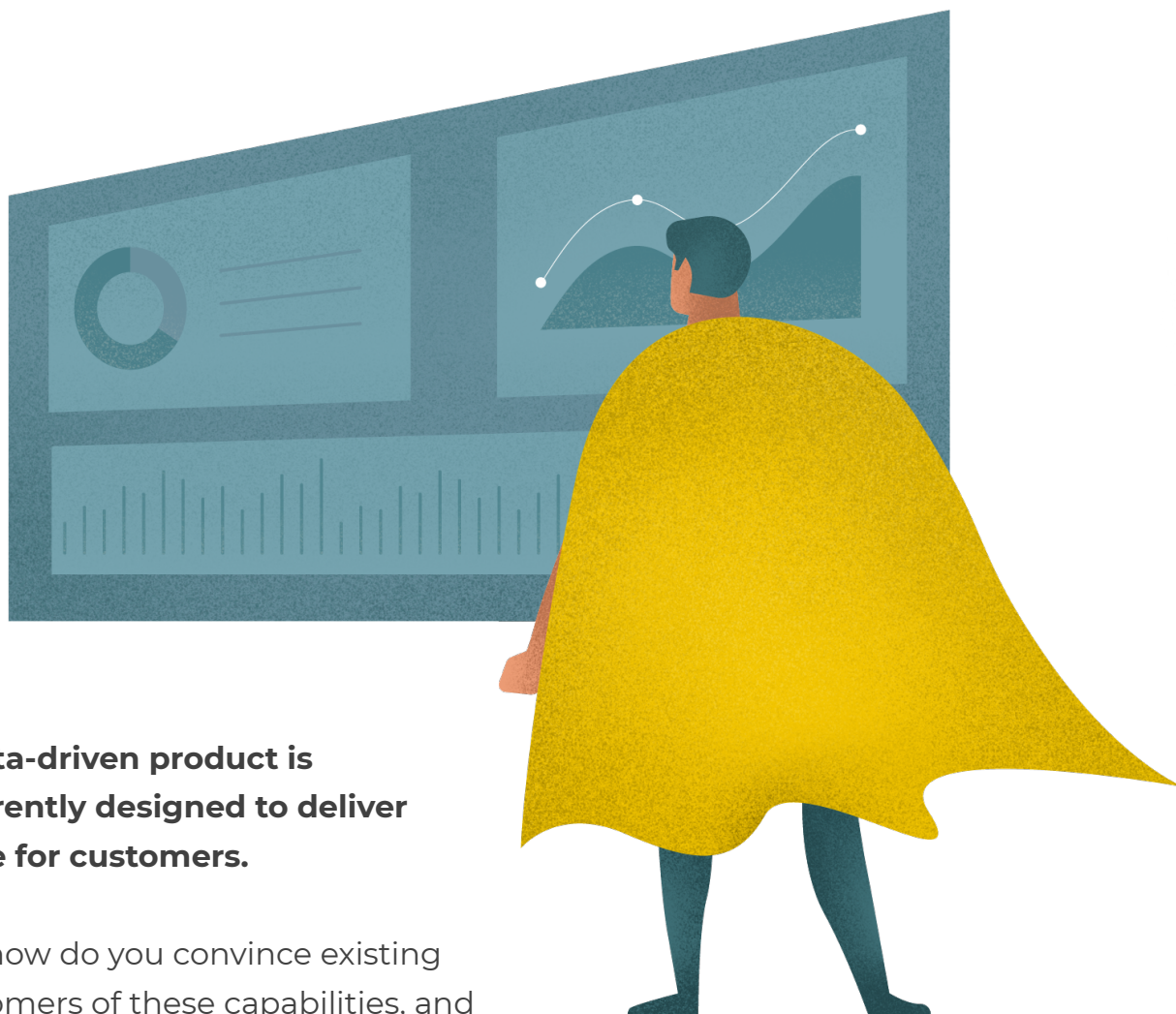
A data-driven product is inherently designed to deliver value for customers.

But how do you convince existing customers of these capabilities, and encourage them to look beyond basic, functional features? More importantly, how do you persuade new prospects about your product's ability to genuinely help them?

You need well-equipped product Champions.

Your Champions are essential conduits between dev and the end-user, relaying feedback, and boosting adoption. **And they must be equipped with data insights to help them defend the value created by your product.**

With the right tools, this value (and their ROI) become obvious.

You can empower two types of Champions with data to defend your product's value:

→ **Champions at home -** Customer Success should be your first go-to when identifying **internal Champions,** as they are key in delivering superior experiences. Internal Champions can also live anywhere across your sales, marketing, support, or even admin departments!

All you need to do is formulate a Customer Success strategy that brings it all together – and take it one step further with a dedicated CS team. An effective customer success strategy can help you bring down churn (66%), increase adoption (65%), and boost renewal rates (57%).

You can maximize these results by supplying CS with data storytelling tools and dashboards.

→ **Champions across borders -** User monitoring and analytics will tell you which end-users are engaging the most with your product.

PMs should work with these **external Champions** to gain a clearer understanding of customer needs and have ambassadors in place to drive adoption across the organization.

External Champions already exist in the form of "super users" who believe strongly in your product and might be referring others to use it across their professional network. It's a good idea to formalize relationships with these Champions, like Microsoft does well with their Champions Program for MS 365!

It's a common misconception that Champions only help with cross-sell/up-sell opportunities. In reality, they act as **a bridge between end-user problems and PM capabilities to find the perfect alignment,** defending your product all the way.

7. Empower Users to Make Decisions Based on Data
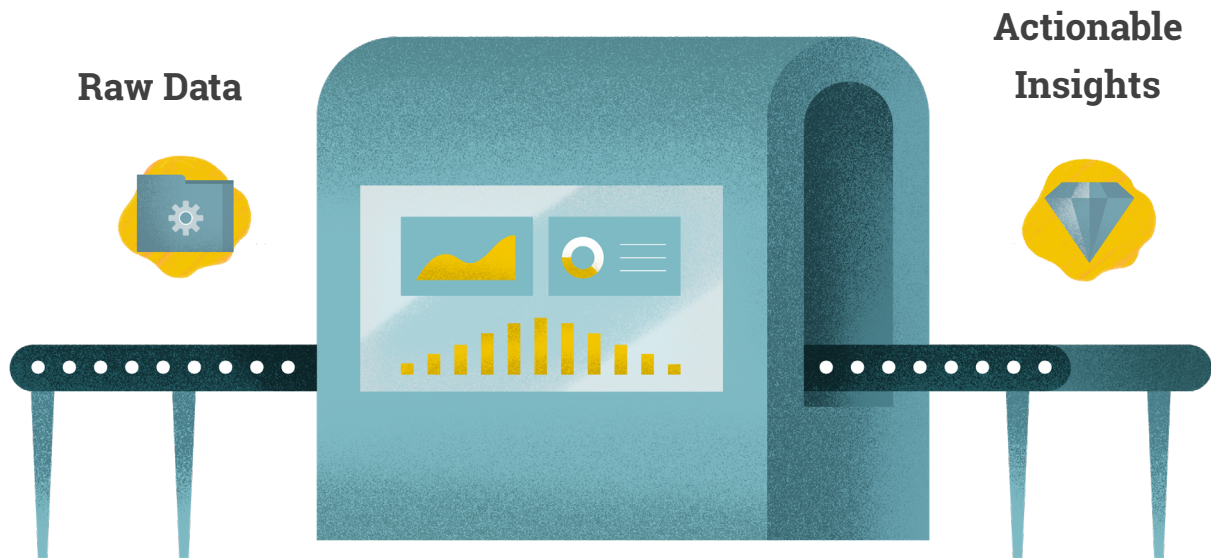
Despite all the buzz around data-driven decision-making, 41% of business leaders struggle to turn their data into executable decisions.

The job of today's PM is to optimize this process by intervening with the *right* software tools and applications. We have already seen how product analytics can help PMs in *their* decision-making process by enabling a quantifiable prioritization of the product roadmap.

Now what if you could act as a similar compass for your users in the downstream?

There are several ways you can unlock the true potential of data-driven decision-making for your customers. Here are three ideas:

→   **Achieve optimal efficiency in operations** - this is a key step towards user empowerment. Recall our initial time & attendance app example, where the product reveals valuable insights that help weed out inefficiencies in workforce operations. A data feature can enable similar optimizations in marketing, supply chain management, recruitment, and other operational areas!

→   **Enable new data partnerships** - correlating multiple datasets can provide a holistic picture, more than the sum of their parts. That's why businesses will often try to aggregate a variety of information silos in search of insights – for example, a retailer combines demand data with footfall monitoring to optimize store layouts. PMs who make products more integration-friendly will become better partners for businesses leveraging these opportunities.

→   **Open up new business models** - today, anyone choosing to pivot their business usually turns to data for advice. Regular data collection and analysis is at the heart of emerging business models like the as-a-Service economy and servitization. Under servitization, manufacturers lease their products and look after maintenance, replacements, and upgrades based on incoming customer data. PMs can support new models like this by enabling companies to collect their end-users' data, uncover signals, and monetize it effectively.

Ideally, any feature that's designed to empower users is built on the principles of data democratization. It will involve minimal technical intervention and will give users maximum freedom and autonomy to explore their datasets and configurations.

8. Own Your Data: Ship Faster with the Ultimate PM Toolbox

"Have no fear of perfection - you'll never reach it."

The wise words of Salvador Dali hold strong in the PM context.

Trying to create a perfect solution will only delay time-to-value for your end-users (see tip 4). No matter how good your product is, you need to ship fast to hold onto your customer base.

It's no surprise, then, that companies using DevOps methodologies for shorter release cycles and continuous delivery report a significant uptick in customer satisfaction (up to 52%).

To get a data-driven product up and running ASAP – without, of course, sacrificing time-to-quality and "stickiness" – PMs need 3 things:

1
Architecture preparedness

Leveraging accessible data warehousing, or building live connections to databases to get your product architecture ready for analytics, is vital. Our friend and resident data warehousing expert, Jeremy Levy, couldn't have said it better:

"When considering customer analytics, storing your data in a warehouse you control ensures a single source of truth that eliminates data errors and increases confidence...but this alone understates the importance of owning your data; maximizing control enables you to extract the most value.

The opportunity cost of not owning your own data is massive.
Today you might be focused on product analytics. Tomorrow you may want to add a new BI tool. Further down the line you may want to investigate opportunities for machine learning and AI. If you outsource data collection and storage to a 3rd party analytics tool, you'll be limited to the features they provide. For example, Amazon would've never created their recommendation engine without owning their data — the differentiation that has made them the most valuable company in the world."

Jeremy Levy
CEO, Indicative

ind:cat:ve

2
A design-first methodology

Develop and display a design-first blueprint that re-affirms how you intend to use data at every step of development, delivery, and value-creation. Then use this methodology to get buy-in from your partners, customers, and investors.

3 **Tailored data analysis models**
Build an analysis model in line with your product KPIs to accurately map your burn rate across sprints.

The data model assures customers that you are operating with a low burn rate and can supply them with a faster time-to-value. For companies lacking the specialized data expertise necessary to prepare the architecture, develop a methodology, and execute data analysis models, third-party solutions are there to help.

In fact, while 63% of product companies currently use their homegrown data solution, 53% plan on switching to a third-party vendor moving forward – and with good reason.

# Build or Buy? The Case for <u>Not</u> Reinventing the Wheel

Build or Buy? The Case for <u>Not</u> Reinventing the Wheel

There will inevitably be considerable expectations of your data capabilities. Both internally, and externally from your customers and prospects.

Let's first consider those external pressures: some users might be switching from Business Intelligence platforms that are more complex, but also more robust. For the rest, this could be their first encounter with a data product – and initial impressions could "hook" a prospect for good.

Internally, leveraging data effectively and making it a core value proposition is a many-layered process for companies that aren't data veterans. You might not have a dedicated analytics database, or could be unfamiliar with design-first methodologies.

Scaling poses yet another challenge, as you may not have the cloud competencies required to scale the data infrastructure with agility.
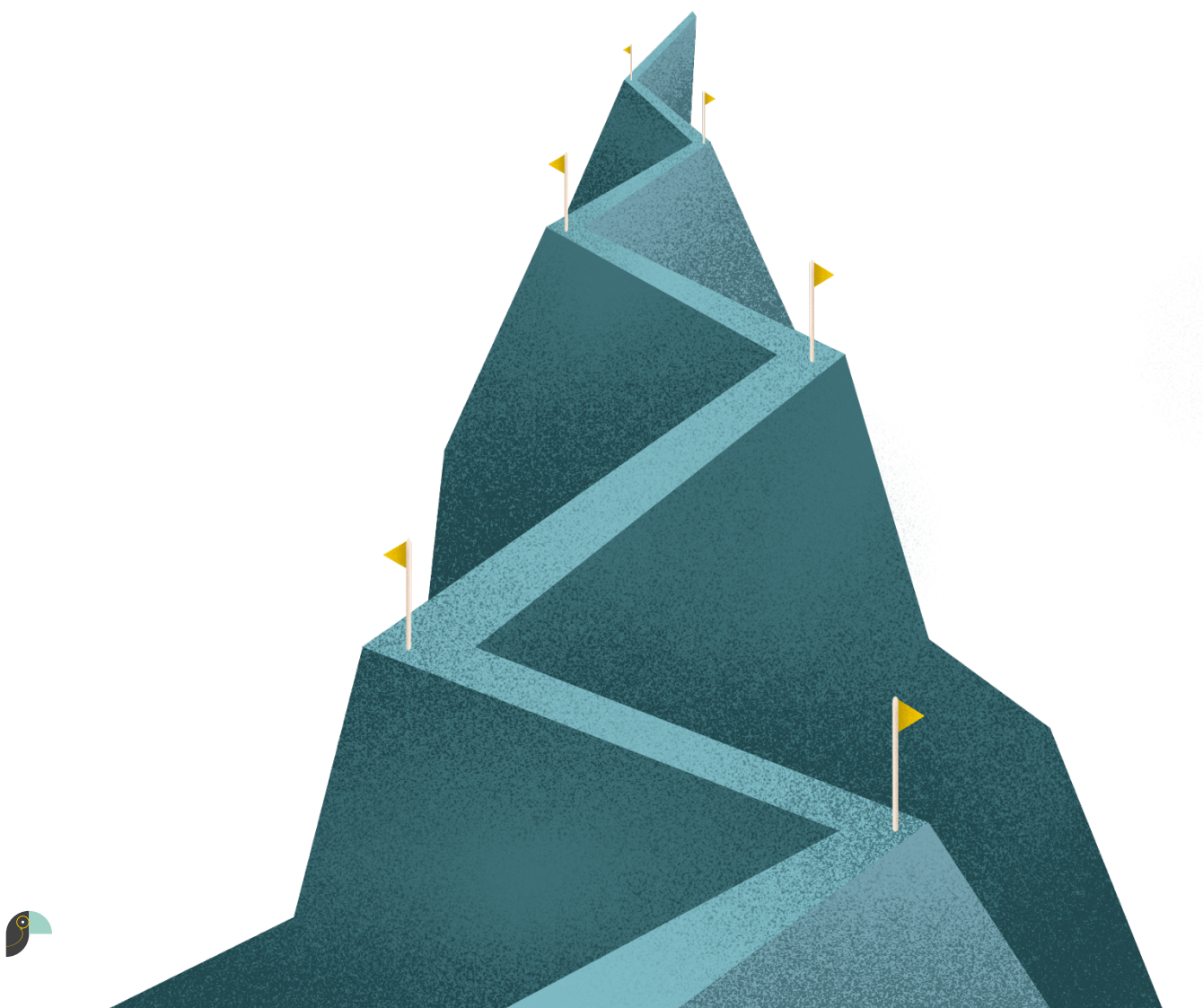
Given this situation, PMs can realistically do one of two things:

Place data features on the backlog - chances are that your product already mines a wealth of data. But without analytics, this is relegated to the backlog. Meanwhile, your customers have to export raw data, so there is always the risk of them switching if a similar product with data capabilities were to enter the market. Research suggests that the typical users' time spent on product peaks after introducing data analytics features (67%) and leads to a better UX (93%).

Buy instead of building from scratch - With third-party data experts specializing in analytics, data management, and visualization, there's no need for PMs to reinvent the wheel. In fact, their time would be better spent on honing unique features and solid specs. That's why so many companies intend to buy third-party capabilities instead of building their own, reaping the benefits of faster deployment, predictable pricing, and ease of use. There's no need to develop a prototype from scratch – you can use a bullet-traced approach to hit the ground running.

For example, we opt for a **design-first approach** with bullet-traced development rather than a slower prototyping strategy. Product Teams don't lose any time or effort, as whatever you build can be plugged into real datasets. Meanwhile, our design guides the data structure you'd need moving forward. **This speeds up production timelines dramatically.** While homegrown builds take an average of 6-8 months, we've found that our approach leads to successful launches in as little as a week.

> *"Companies who eschewed internal builds in favor of an embedded solution were able to go live with hosted analytics functionality in an average of three weeks – homegrown builds were projected to require, on average, 6 to 8 months."*
>
> *A 2019 report by Nucleus Research*

Third-party solutions are also easier to scale. They typically come with a pre-specified threshold (say 10 GB of data), beyond which you can expand into a ready cloud environment.

Homegrown solutions are better suited for end-to-end customization and more elaborate production roadmaps (with longer timelines to boot). On the other hand, **buying means that PMs don't have to expend any energy on maintaining a data feature codebase or growing one over time.** That means you can direct all your efforts towards solving user pains while a third-party tool does the (important) grunt work in the background.

Conclusion: Applying These Takeaways to Your Roadmap
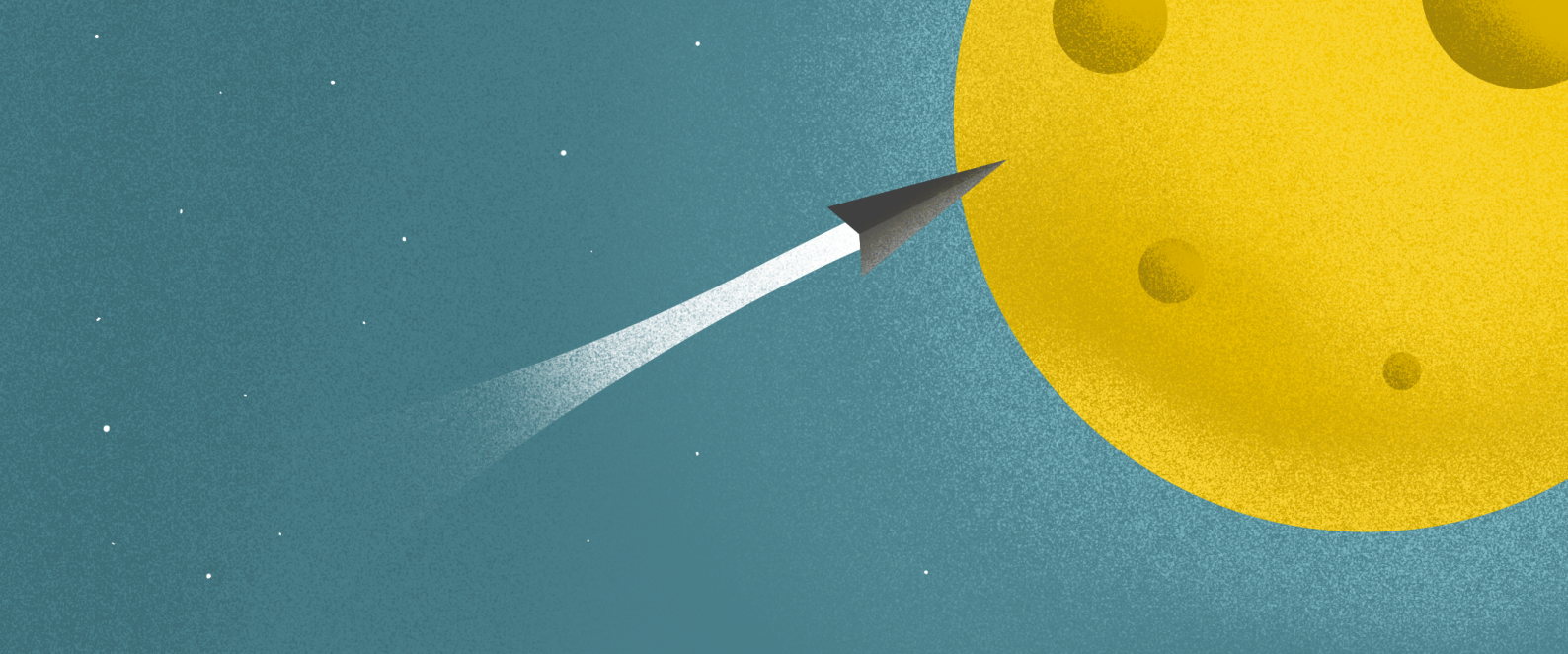
Conclusion: Applying These Takeaways to Your Roadmap

Data can be your new best friend. Both at home, and in the big bad world outside.

Internally, it supports a proactive product roadmap, letting you prioritize more effectively, get stakeholders on board, and manage costs.

On the market-facing side, you get a better grasp of user pain-points, can measure feature performance in the real world, and convert passive users to vocal proponents of your product. Customers use your data product to grow their business, and these topline outcomes trickle down to benefit you as a PM, as well as your entire team.

It all begins with effective data democratization: unlocking the chains to the former ivory tower.

Today, there's no real barrier separating data scientists from business users and non-technicals. Internally, simpler and actionable product analytics let you optimize the roadmap like never before. And you can pay it forward by weaving an additional layer of value into the product, extending access to everyone through democratized features.

The insights we discussed will help you achieve data-driven efficiency at every step: from conceptualization and design, to delivery and finetuning. In the spirit of democratization, it's also a good idea to look beyond your organizational barriers and tap into collective competencies. For example, external Champions could become the biggest proponents of your product (see tip 6). Similarly, third-party data experts can be strategic partners for PMs who want to accelerate and expand deployments.

As product teams, we're incredibly proud of what we build – but the true power of data lies in its scale and collective reach.

As we move boldly forward in the data-driven age, let's keep learning from our Champions, reduce pressure on our resources, and benefit from shared capabilities to deliver game-changing products that make a real difference.

Thanks for Reading!

Want to Learn More?

Connect with us:

Contact us:

toucantoco.com   **go@toucantoco.com**

TOUCAN TOCO