

Martech for 2024

by Scott Brinker and Frans Riemersma

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Authors



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1. Introduction

“We must consolidate!”

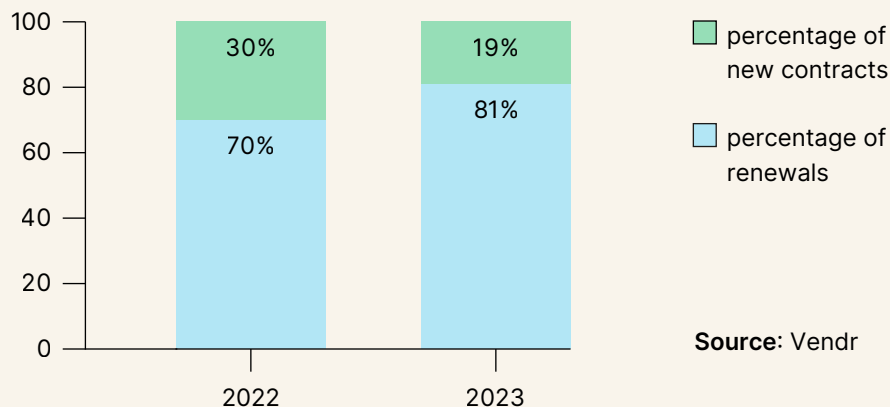
Marketing technology — martech — is a study in contradictions.

On one hand, in the current economic environment, marketers and marketing operations leaders have come under enormous pressure to cut costs and demonstrate value from their existing martech investments. A [recent Gartner report](#) claiming that companies were only “utilizing” 33% of their martech capabilities has served a rallying cry for CMOs, CIOs, and CFOs to consolidate or eliminate unnecessary products from the stack.

So not surprisingly, [Gartner also reported](#) that 75% of CMOs now agree with the statement that “our marketing organization is facing increasing pressure to cut our marketing technology spend to deliver better ROI.”

And it’s not just about cutting existing software. It’s also about reining in new purchases. [Recent data](#) from the SaaS management and procurement services firm Vendr, showed that net new software contracts in 2023 dropped relative to renewals, as firms become more cautious about adding more tools to their stack.

Net new software contracts vs renewals



Bringing more discipline and fiscal responsibility to martech management is definitely a good thing. We champion the concept of stack rationalization — which is a fancy way of saying that you should simplify your stack as much as possible down to what you are able to use effectively.

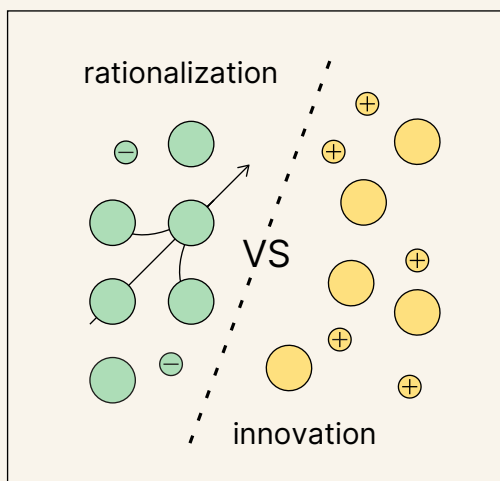
However, the devil is in the details. We put “utilization” in quotes above because the value of tools can’t always be measured by the frequency or depth of their usage. And some redundancy or overlap among tools in your stack may actually have value and serve important use cases — even if they’re edge cases — that shouldn’t be dismissed out of hand.

We advise keeping the focus on *business value*, not tool count. Consolidation and utilization are not a business strategy.

“We must innovate!”

But while the forces of consolidation — or, really, rationalization — should serve to reduce the number of products in martech stacks, and therefore the number of vendors in the market, there’s a countervailing force that is pushing hard in the opposite direction: *innovation*.

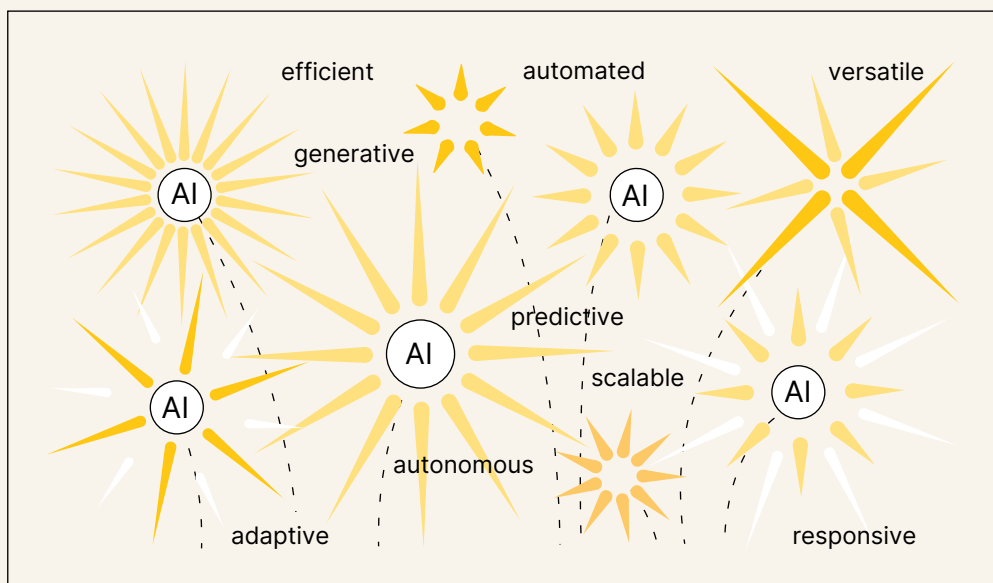
Thanks largely to the explosion of AI in the past year, but also due to other major technology shifts underway with the cloud data layer and



“composable” software, the martech landscape continues to evolve and expand.

In fact, this past year — a year of tight economic pressure — has seen the largest number of new apps added to the martech landscape in the 13 years we’ve been curating it: *net new growth of approximately 3,000 new tools*.

And while it might be tempting to channel Lieutenant Drebin of *The Naked Gun* waving away the crowds — “Move along! Nothing to see here!” — as fireworks explode spectacularly behind him, it would be as much of a mistake to overlook what’s happening with this flurry of new startups as it would be to overindex on embracing too many of them too quickly.



Here again, we advise framing your approach around business value. Experimenting with cool tools that don’t yet have a clear customer or business use case should be kept to a modest percentage of time and resources. Maybe 5%, no more than 10%.

But you don’t want to be blind to what’s happening on the frontier of martech, as you risk missing out on opportunities for competitive advantage in today’s highly disruptive environment. (“Disrupt or be disrupted” is a warning every executive should heed. It’s for good reason in the *CEO Decision-Making in the Age of AI* report from IBM that “technology factors” were cited as the external force that CEOs believe will most impact their business over the next three years.)

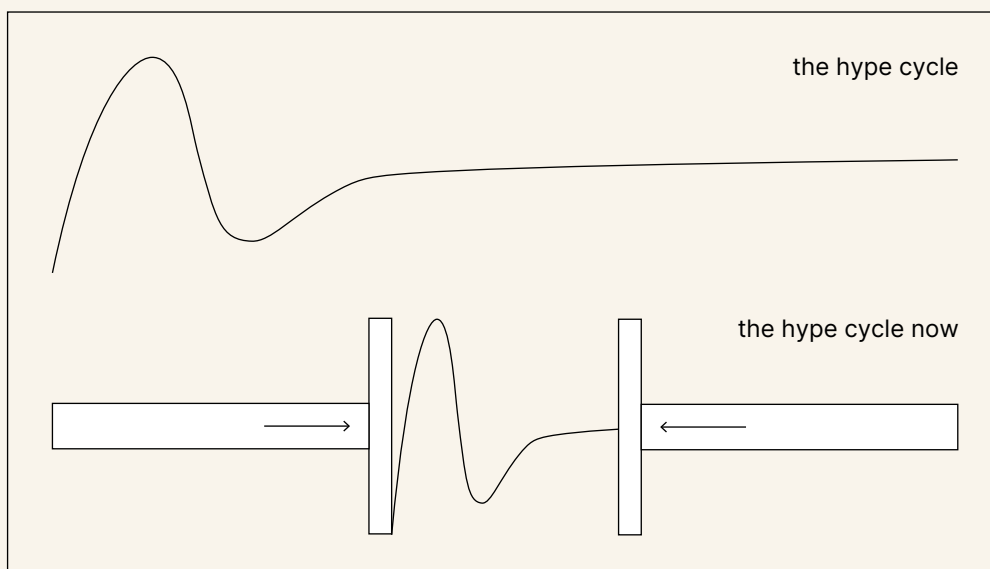
But keeping grounded on clear use cases — even if you’re adopting new ways of addressing them — will prevent you from wandering too far from the path of business value.

Manage the Hype Cycle — or be managed by it

The Gartner Hype Cycle is an iconic view of how new technology spreads through the market. Initially, it's overestimated (the hype). Then it's underestimated (the backlash). Eventually it settles into realistic adoption and use.

The Hype Cycle has been the bane of CIOs for decades, and increasingly CMOs feel the pain of its whiplash too.

These cycles used to play out over many years. For instance, the long journey of applications moving into the cloud. But cycles have been steadily compressing, getting shorter and shorter, happening faster and faster. With generative AI, we've witnessed a series of innovations that seem to have flown through the cycle in a matter of months.

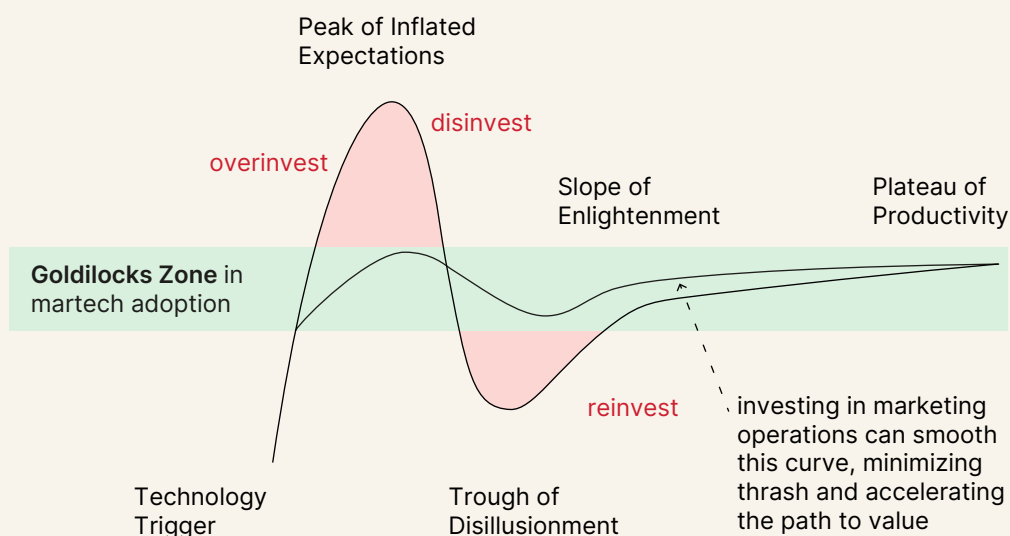


Consider the unveiling of ChatGPT last November. There were a couple of months of crazy hype. Then a couple of months of disillusioned backlash of all the things ChatGPT *couldn't* do — properly calculate math, use up-to-date data from the web, work with multi-modal formats, etc. — until, well, a few months later it could. And now, just a

year after its release, the *Financial Times* reports that over 40 million people in the US are already using generative AI at work.

You can't ignore these Hype Cycles — at least not the ones relevant to your business. But you can't get carried away by them either. The overinvestment that happens in the early stage of the Hype Cycle draws valuable resources away from other priorities and delivers underwhelming returns. Vice versa, the divestment and reinvestment that occurs around the "trough of disillusionment" stage can be a costly restart that loses much or all of your previous learning and development from before.

The Hype Cycle



Source: chiefmartec

Our advice is to seek to flatten the dynamics of the Hype Cycle within your own organization. There's a "Goldilocks Zone" through the center of the curve where you moderate the highs and the lows.

This is about *expectation management* as much as technology management. You need to guide stakeholders in your business through a realistic course of adoption. Great marketing operations teams should own this responsibility.

The universal struggle of Martec's Law

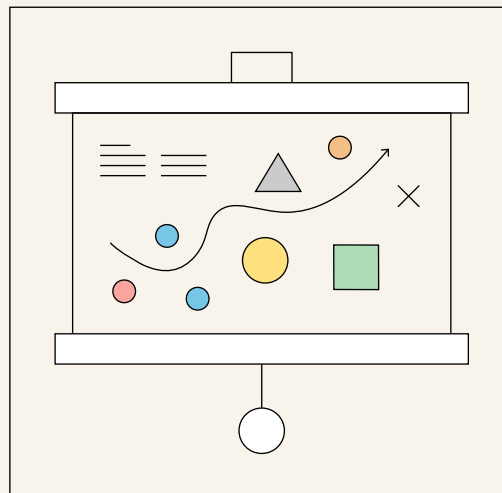
"Technology changes exponentially, but organizations change logarithmically." This is the hard truth of Martec's Law, what we've posited is the greatest management challenge of the 21st century.

If you've ever felt that technology is moving too fast and that you never seem to be able to get ahead of it within your business — you're always chasing or being chased by something — then you've felt the weight of Martec's Law. This dynamic is not unique to martech. But it is something that everyone who touches martech is acutely aware of.

AI has certainly amplified this sensation.

The "good" news is that you're not alone. Every business is wrestling with this challenge. And while there's no silver bullet — sorry! — there are two solid strategies for managing it.

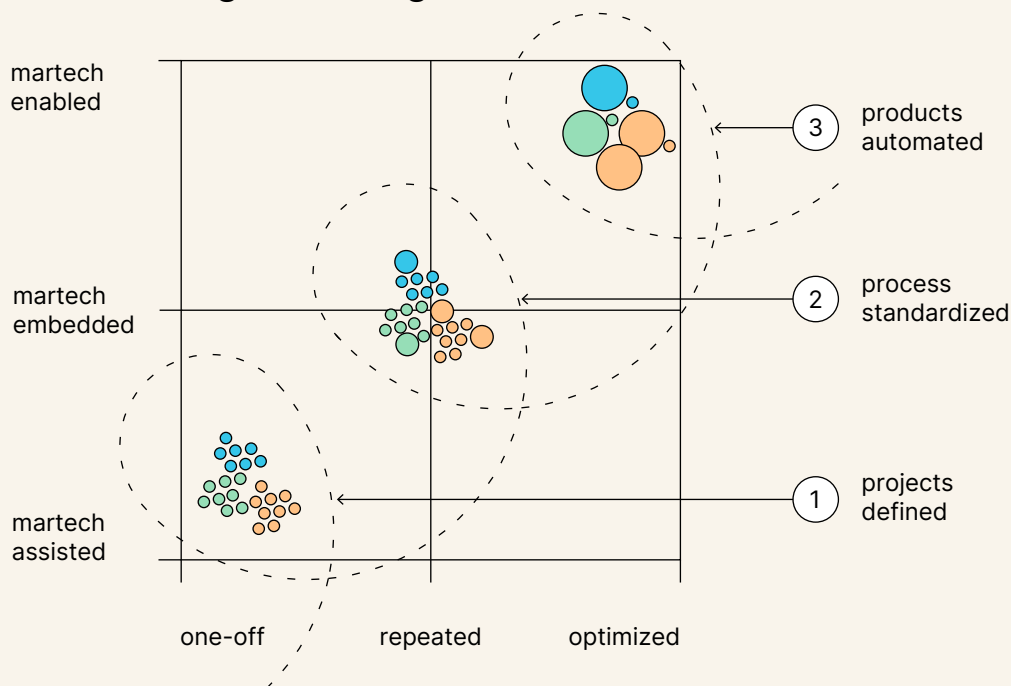
The first: *be strategic and deliberate about which changes you embrace, and in what order.* You can't boil the ocean, especially not all at once. We'll emphasize again how important it is to focus the application of martech on concrete use cases aligned with a well-defined business strategy. Don't peanut butter your investments in capability development.



The second: *be more agile.* We mean this in the sense of agile management, not a euphemism for "work faster." Develop capabilities and customer experiences in a more iterative and incremental fashion. Design with change in mind, with open platform principles. Engender a culture of continuous experimentation and learning.

As an agile martech practice, we recommend a *hack-pack-stack methodology* for iteratively developing new martech capabilities. Start with a stand alone “hack” version of a concept to find out if it can be done technically and data-wise and — importantly — to see if customers (or employees for an internal capability) like it. Once you’ve proven feasibility and demonstrated customer traction, then clean up the hack by leaving out anything that can be left out and turn it into a more standardized process, the “pack” version. Finally, refactor the solution in a scalable low-maintenance, automated “stack” version and complete its integration into the rest of your stack.

Productizing marketing



①

The “Hack-version”
Create a stand alone version to find out if it can be done technically and data-wise AND if the customer likes it.

②

The “Pack-version”
Once there is proper customer traction, clean up the hack by leaving out anything that can be left out (data, content, lists, ETL).

③

The “Stack-version”
Refactor into a scalable zero-maintenance version and integrate into the ecosystem.

Source: MartechTribe

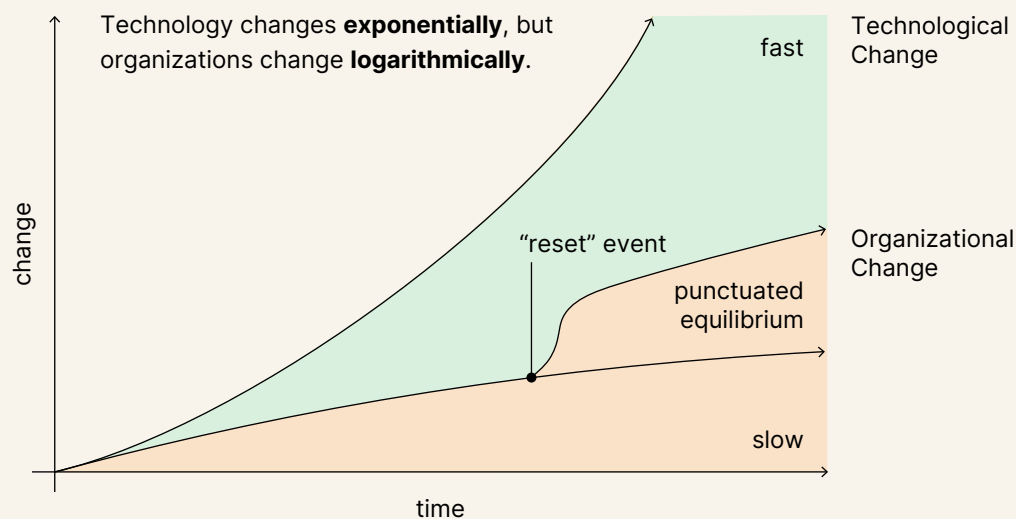
This is an agile way of “productizing” marketing in a pragmatic, stepwise manner.

Deliberate choices and *agile management* are two strategies that let you change faster than your competition, which under most circumstances is really all the speed you need.

However, every now and again, a significant environmental event enables us to make a discontinuous leap in organizational change relative to technology. It is a moment of “punctuated equilibrium” to borrow a term from evolutionary biology.

The COVID-19 pandemic was one such event, which accelerated digital transformation for many companies by a magnitude of years.

Martec’s Law



Source: chiefmartec

The AI explosion we’re experiencing now is another. As we’ll discuss in this report, one of the unique characteristics of certain AI innovations is that they have the potential to help manage some of the technological complexity we’re wrestling with, instead of only contributing more complexity to the fray.

Martech markets, stacks, and perspectives

There are three chapters ahead in this report.

In the following chapter, we'll share our latest data and analysis of the martech market: what's happening in the vendor landscape, especially with AI, and how we see that reflected in adoption in tech stacks. We'll address consolidation — or seemingly the lack thereof — and the fascinating nature of the “long tail” of small martech products.

Next, we'll do a deeper dive to explain major trends we see within stacks that are shaping the way martech is increasingly architected and managed. We'll explain the growing patterns of “aggregation” and “composability” and how we see AI impacting this in the year ahead.

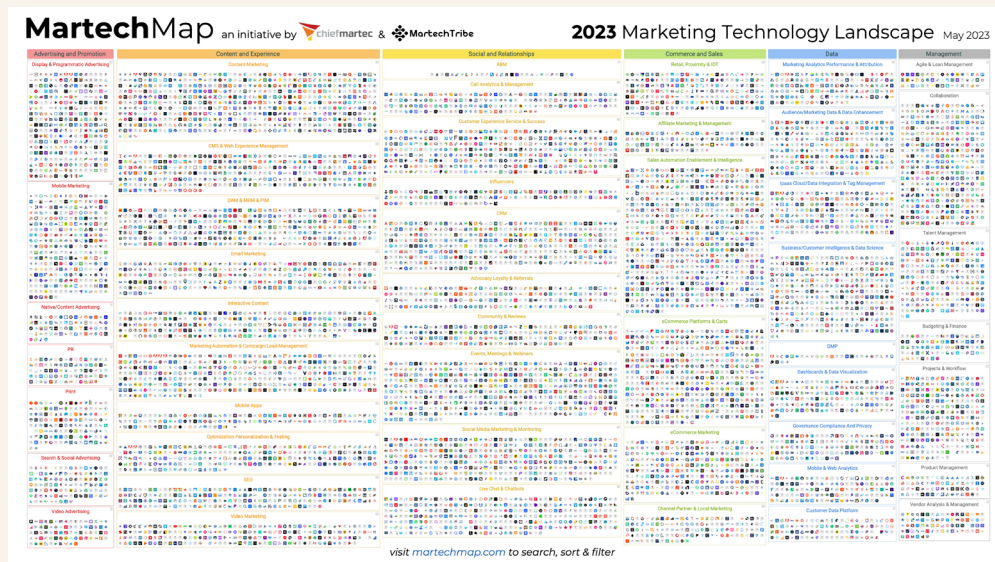
Finally, we'll close with a series of interviews from martech experts from the five sponsors of this report: [GrowthLoop](#), [mParticle](#), [OfferFit](#), [SAS](#), and [Snowplow](#). While they obviously have commercial interests in their points of view, they also have tremendous domain expertise in the areas in which they're competing. We guided these interviews to tap their insights in a non-promotional manner.

2. Trends in the Martech Market

The number of martech vendors keeps growing

The martech industry has seen a flood of new solutions this year. The current total number of solutions on our [MartechMap](#) is now **13,080!** That's a net increase of 18.5% in just the past six months since our last release in May.

Martech landscape in May 2023



Source: [MartechMap](#)

Not surprisingly, generative AI is responsible for at least 73% of the increase — new AI-centric startups in the long tail. And that's in addition to all of the generative AI features that have been embedded into existing martech products this year.

If we zoom in on these generative AI solutions added since May 2023, we see an interesting distribution across the landscape. Most generative AI tools showed up in categories that were already densely populated with many long tail products:

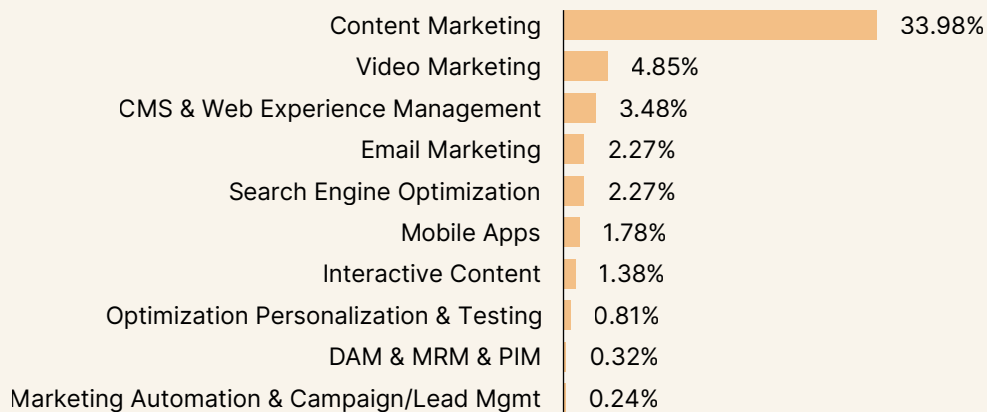
- Content Marketing
- Sales enablement, Automation & Intelligence
- Business/Customer Intelligence & Data Science

To a lesser extent, these other categories also saw significant expansion with new generative AI startups.

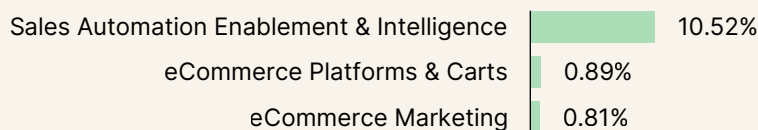
- Live chat, Chatbots
- Customer Experience, Service & Success
- Social Media Marketing & Monitoring
- Collaboration

New (AI) tools by martech category (since May 2023)

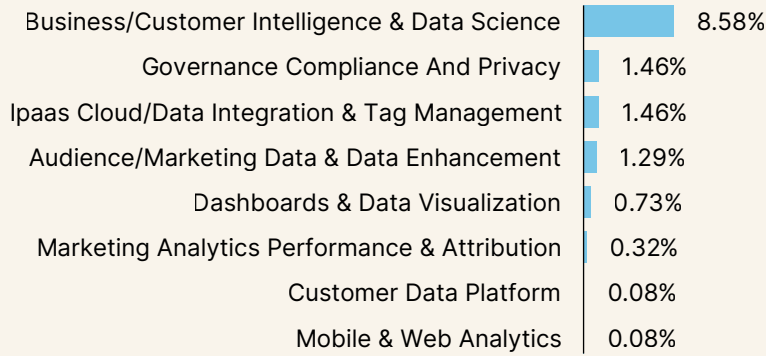
Content & Experience



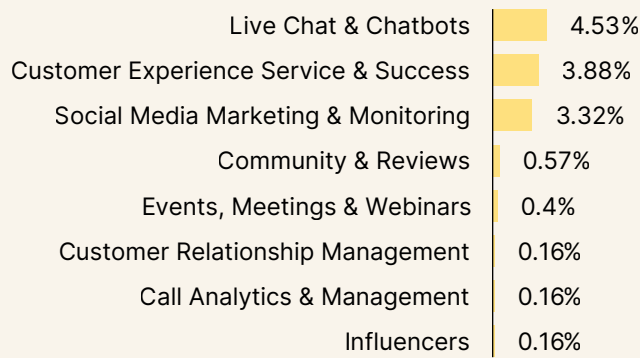
Sales & Commerce



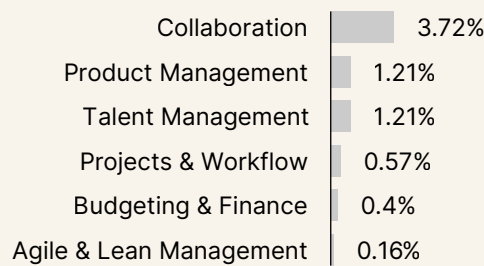
Data



Social & Relationships



Management



Advertising and Promotions

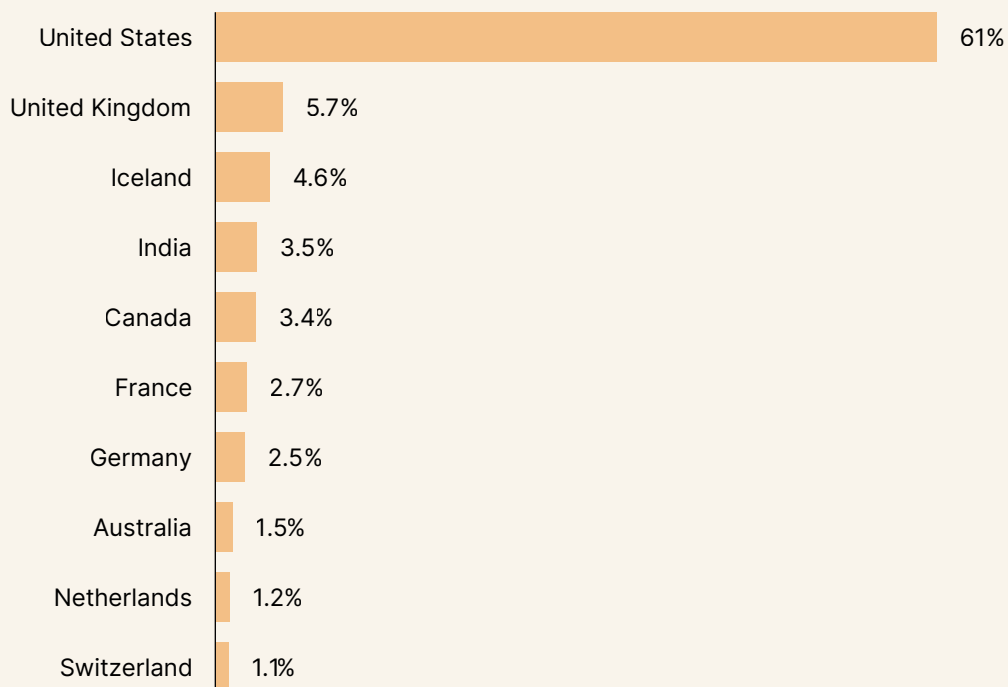


Source: MartechTribe

It's also fascinating to examine from which countries the most new generative AI martech tools are emerging. The United States is far in the lead. Nonetheless a significant number were also launched in these countries:

- United Kingdom
- Iceland
- India
- Canada
- France
- Germany

Top 10 countries launching new (AI) tools (since May 2023)



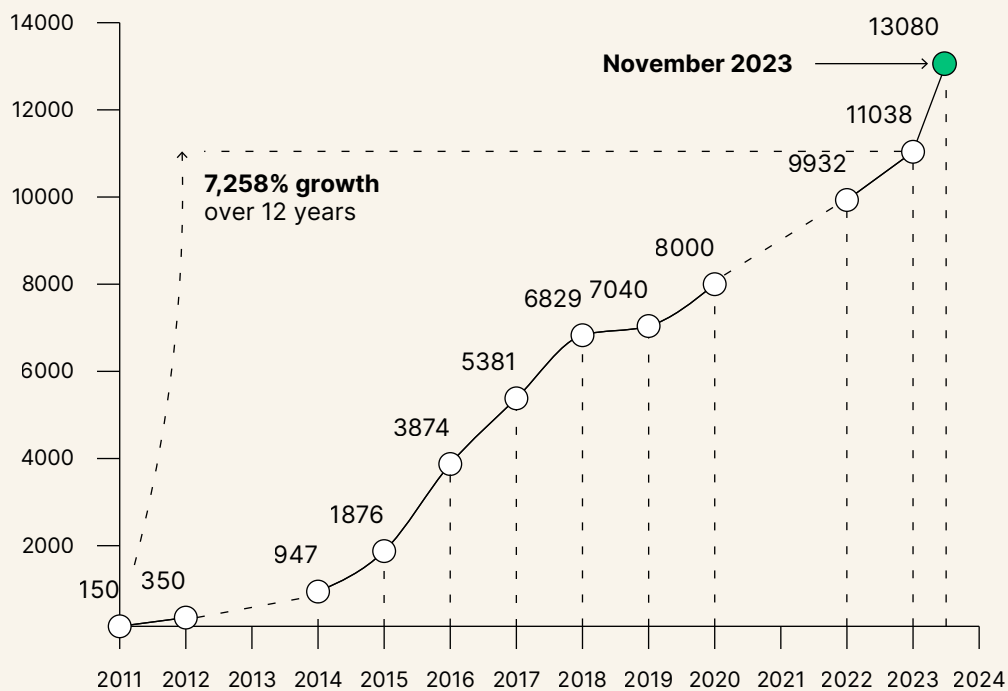
Source: MartechTribe

Iceland is particularly surprising, given its relative size as a country. It proves the point that innovative martech can come from anywhere — and does.

Will martech growth ever stop?

Over the last decade, the number of software apps in the martech universe continued to grow at a remarkable pace. Predictably, the most common question we heard with every annual release of our expanded landscape supergraphic was: “When will consolidation in the market happen?”

Number of martech software apps since 2011



Source: chiefmartec & MartechTribe

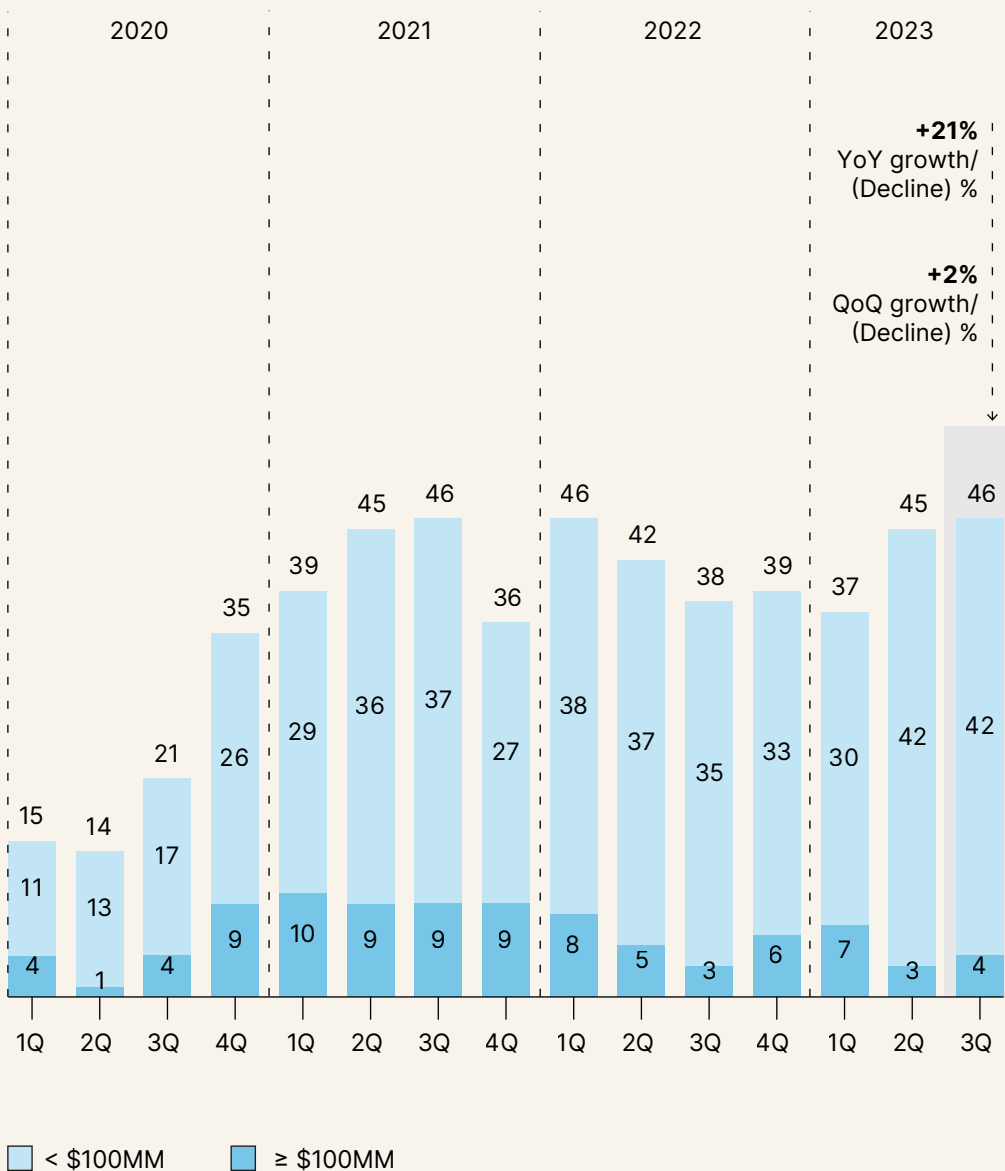
Before we reveal what we expect to see in 2024, however, we should define what “consolidation” means.

Colloquially, consolidation means a huge decline in the number of solutions. This can happen due to mergers & acquisitions (M&A) or a

shakeout (i.e., bankruptcies) due to economic downturns or a surplus in supply.

The truth is that M&A and shutdowns happen constantly throughout the martech landscape. The Q3 202 Market Report from LUMA Partners documents an average of 40+ martech acquisitions per quarter for the past three years, with an additional 15+ per quarter in adtech.

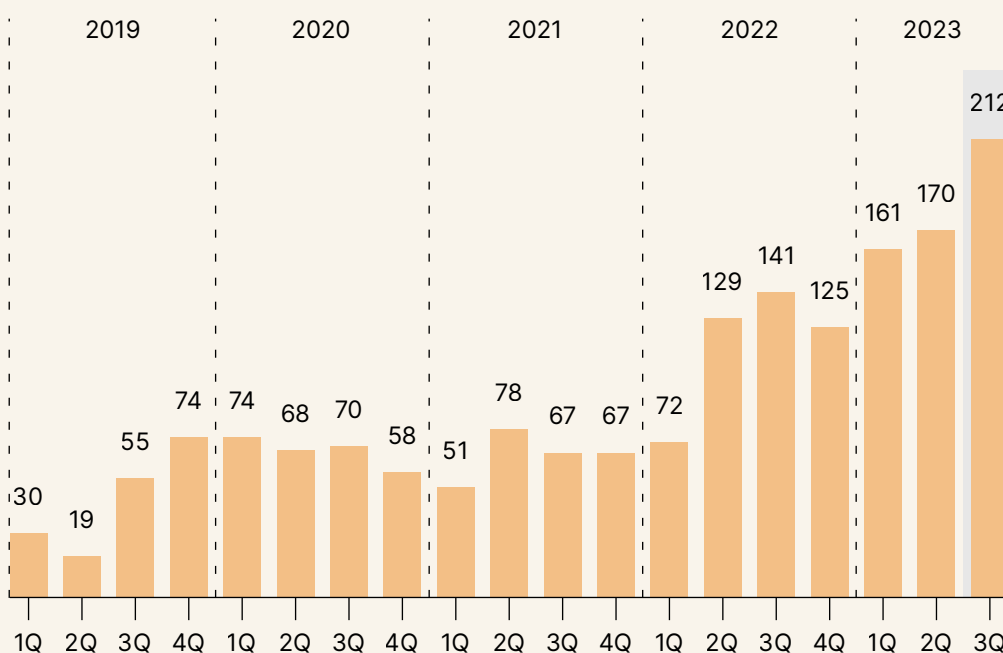
Martech aquisitions by number of transactions (quarterly)



Source: Luma Partners

Acquisition is the happiest path by which consolidation occurs. The more likely exit scenario for failed martech companies is being shut down. And while there has been a rise in the total amount of capital invested in SaaS ventures these past few years, there has also been a rise in the number of startups that shut down.

Number of startups using Carta that shut down (quarterly)



Source: Carta

Note: Data represents startups that shut down due to bankruptcy/dissolution.

We certainly have witnessed this in the martech industry. From May 2022 to May 2023, we removed 639 companies from our landscape that were consolidated away — a non-trivial 7% churn rate.

However, such pruning is outweighed on the other side of the equation by the continued stream of new startups launched, as well as our own discovery of more niche solutions within particular geographies, functional specialties, or verticals.

So by raw count of solutions, the industry has most certainly *not* consolidated.

However, not all martech vendors are equal in scale. If we measure by revenue and/or install base, the graph of all martech companies is a “long tail” distribution.

There are a small number of very large companies at the head of the tail, such as Adobe, HubSpot, Microsoft, Oracle, Salesforce etc. Think public companies with a market cap greater than \$20 billion. Then there are a couple hundred category and vertical market leaders in the torso. When a company has crossed \$100–200 million in annual revenue and is considered a top brand in their space, they’re in the torso.

And then there’s the long tail of everything else — well over 12,000 products at this point.

We’ll dissect the long tail in more detail in a moment. But framing the discussion by scale gives us a more nuanced way to look at “consolidation” in the industry.

If we measure consolidation by the growth of large companies in the head and torso of this distribution, we absolutely see consolidation effects. Some of this is through organic growth. Some of it is inorganic — these are the ones acquiring promising long tail startups.

Not only are these companies still growing in their revenue — often by impressive double-digit percentages — they’re growing in their presence in most companies’ tech stacks. We see the same small set of “head” martech solutions appear in the majority of martech stacks.

However, while these vendors in the head are almost always bundling more and more functionality into their product portfolios — to absorb more and more of the “share of stack” of their customers — the presence of long tail products in stacks surprisingly isn’t shrinking to the degree you’d expect.

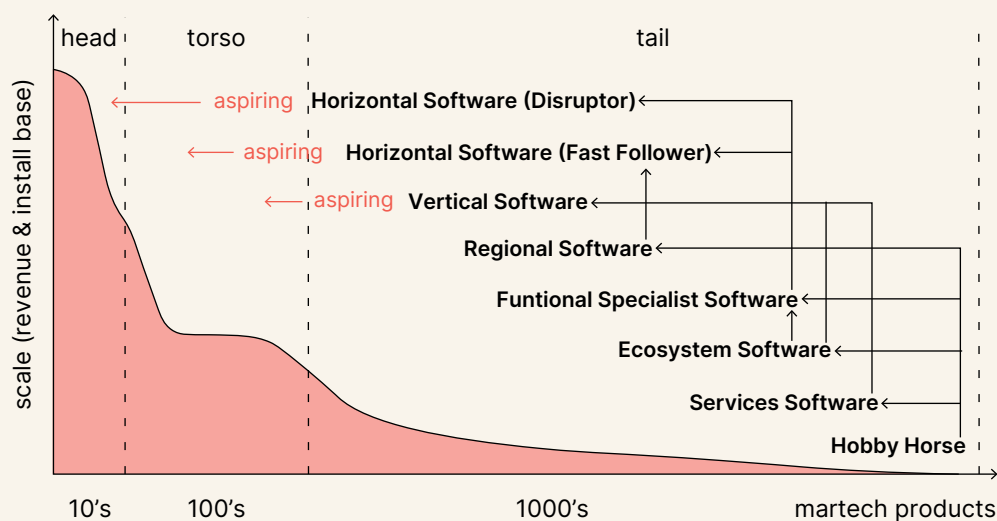
What's in the martech long tail and why is it so long?

Martech's long tail is far from a uniform set of solutions. They differ in their goals and the strategies by which they pursue them. They can be at different stages in their venture journey — from a startup that aspires to someday be at the head of the tail to a niche provider that is satisfied with the unique space they've carved out in the market.

We've categorized eight different kinds of long tail martech companies to help explain what they do and why they exist:

- Horizontal software (disruptor) startups
- Horizontal software (fast follower) startups
- Vertical software companies
- Regional software
- Functional specialist software
- Ecosystem software
- Services software
- Hobby horse

The different types of long tail martech companies



The ones most people think of — especially when complaining that “all these martech companies basically do the same thing” — and point to as a reason for the industry to consolidate are *horizontal software startups*.

These are ventures that are building solutions that are expected to be applicable to many, many companies across industries and geographies. They start out as small companies in the long tail — as all startups must — but their ambition is to grow (or be acquired) into a large head or torso leader in the industry.

Unfortunately, this is hard to do. Most will not succeed at breaking out of the long tail and will either be acquired in a lesser deal, go defunct, or limp along in a zombie state, clogging up the landscape.

But here’s the thing: some *will succeed*. In fact, you could argue that it is the intense, competitive jostling between all of these aspiring horizontal contenders that forges the winners.

All those that fail to break-out though — and haven’t been consolidated out of the market — contribute to the count of companies in the long tail.

We distinguish between two variations of horizontal long tail companies:

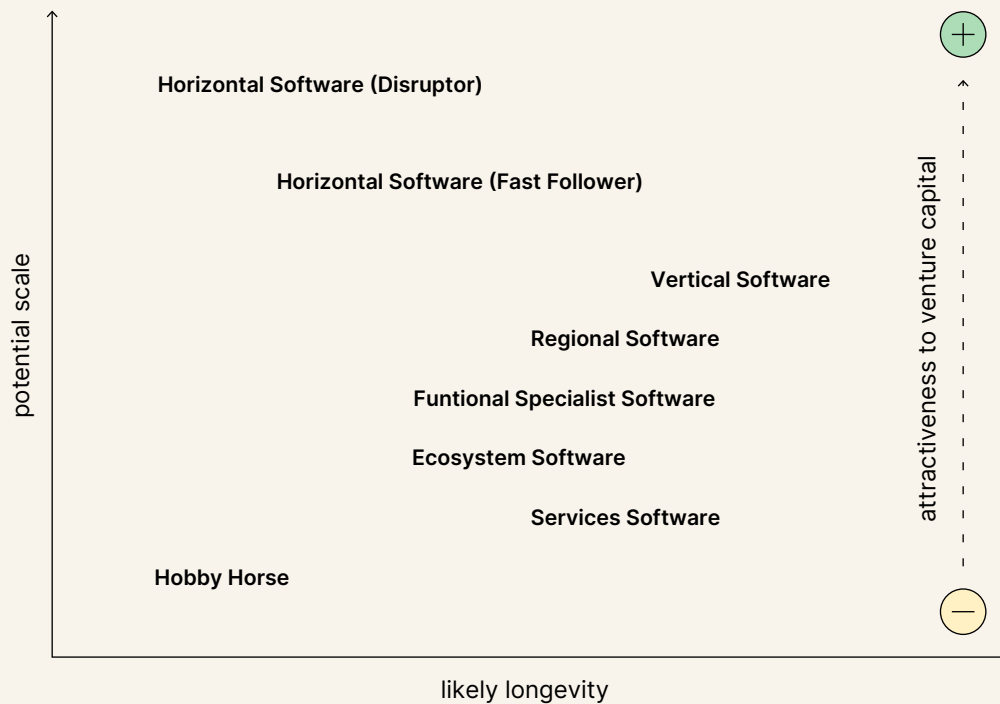
- *Disruptors* who pursue an innovative new approach or technology
- *Fast followers* who optimize what successful disruptors pioneer

The main distinction between the two is that there tend to be fewer true disruptors and their lifespan tends to be shorter, as they’re inherently pursuing risky and unproven ideas. However, those that do succeed often achieve the greatest financial outcomes.

Venture capitalists love horizontal disruptors.

In comparison, there are more fast followers, and they have a slight edge in survivability — they know there’s a market for what they’re building — but with a trade-off in the likelihood of being a breakthrough success. They have a lot of direct competition, and the odds are that most of them will become also-rans.

Company types and attractiveness to VC investment



Source: chiefmartec

The rest of the martech long tail has slightly different dynamics — mostly due to greater specialization.

Vertical software products tailor a solution to a particular industry. Even if some of the underlying technologies are horizontal in nature, the vertical vendor will tailor them to the needs of their narrowly targeted customer base. Everything from workflow, to data structures, to terminology, to integrations across other products and technologies used in that field — as well as their go-to-market — is optimized for that specific audience.

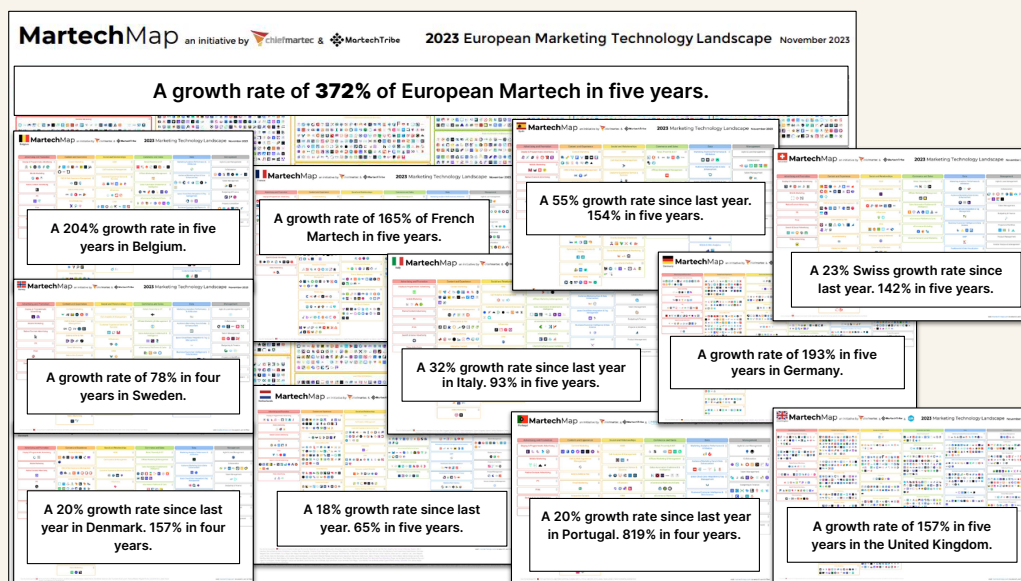
Vertical solutions can grow to be sizable, depending, of course, on the size of the industry they serve. A few will break out of the long tail. Most will not. But even those that remain in the long tail can be relatively stable businesses, as they tend to become more deeply embedded in their customers' operations by the nature of being fitted to that purpose.

Regional software products grow up in a specific country or block of countries. From the start, they embed the language, culture, legal requirements, local integrations, and other idiosyncrasies of their corner of the world.

While they are inherently smaller than globally-oriented horizontal solutions in their category, they have a number of levers by which they grow and defend their local territory:

- They offer helpdesk support in the language and timezone of their customers.
- They host their software in-region to address data residency laws that are tricky for global providers to navigate.
- They have localized pricing strategies that are supported by local currency and payment systems.
- They use local metrics and notations.
- They stay on top of local regulatory changes.
- They invest in their brand with the sort of knowledge that only a local could appreciate.

Martech growth in regional markets



Source: MartechTribe

Very few regional companies will break out of the long tail — unless they convert into a more global, horizontal solution. But once they get traction in their region, they have a good probability of surviving.

Functional specialist software products are what have sometimes been called “point solutions.” That shouldn’t be an inherently negative term. Products that do one thing extraordinarily well are often deeply loved by the individuals who use them for their particular job. And if they integrate with other, larger platforms in your stack — not all of them need to, but many increasingly do — they can slip into your larger workflow and data management.

Examples of functional specialist products include podcast recording, QR code generation, event engagement tools, group scheduling apps, writing editors, etc. Browse through the posts on [Product Hunt](#), and you’ll see dozens of examples.

Many of these products are perfectly happy in the long tail. They’re more likely to be bootstrapped or modestly funded by angels and friends & family. But if they’re good at what they do, they can carve out a profitable and semi-defensible niche. Or, in some cases, get acquired as a “feature” added to a larger horizontal tool.

But not every “feature” needs to be bundled. Horizontal software can run the risk of overloading their users by stuffing too many things in the box. A wide selection of specialist tools that complement those horizontal platforms — all available as independent *options* — can potentially deliver a better overall experience.

This is why we believe best-of-feature adoption for addressing concrete use cases can be evaluated across both bundled capabilities in large horizontal platforms as well as functional specialist apps.

Ecosystem software products are often variations of vertical software or functional specialist software, but they’re designed specifically for a particular platform. The ecosystems around Adobe, HubSpot, Microsoft, Salesforce, Shopify, Slack, Snowflake, etc., are populated not only with integrations from other SaaS companies, but also products and extensions that were built natively for those platforms. The biggest platform ecosystems revolve around horizontal software,

but larger vertical, regional, and functional specialist platforms often develop ecosystems too.

The advantage of ecosystem software apps is the focus they bring — both in their product and their go-to-market — to serve the needs of a target audience in a way that fits seamlessly into their existing data, workflow, and user experience. They also get the benefit of riding on top of the growth of the platform. This can result in better than average longevity.

The trade-off is that the total addressable market (TAM) of an ecosystem software app is limited to the size of the host platform. However, we sometimes see leading ecosystem software apps grow beyond the initial platform they serve and become cross-platform or independent solutions.

Services software products — built by services companies — tend to be a bit different. They don't necessarily have to be viable on their own. They're often entangled with the services the firm offers. These products are sometimes used to acquire new clients, potentially as a loss leader. But more often, they're used to deliver differentiated or more efficient services — or to maintain a longer-term relationship with clients beyond time-bounded projects.

These products usually have better than average survivability, as long as the services firm exists and chooses to continue operating that product. Their TAM, however, is usually quite limited.

We don't include many of these on our martech landscape today because it can be hard to distinguish what is a service and what is a product. But as those lines continue to blur — which we believe they will — we'll revisit the heuristics of our catalog.

Finally, there are the *hobby horses*.

These are all the experiments, passion projects, side hustles that thousands of developers spin up every year. We're seeing a ton of them around generative AI right now. Most are so small or so short-lived as to never even make it on to the martech landscape. But some do gain enough momentum to be visible. And the best of them may transition into "real" long tail businesses.

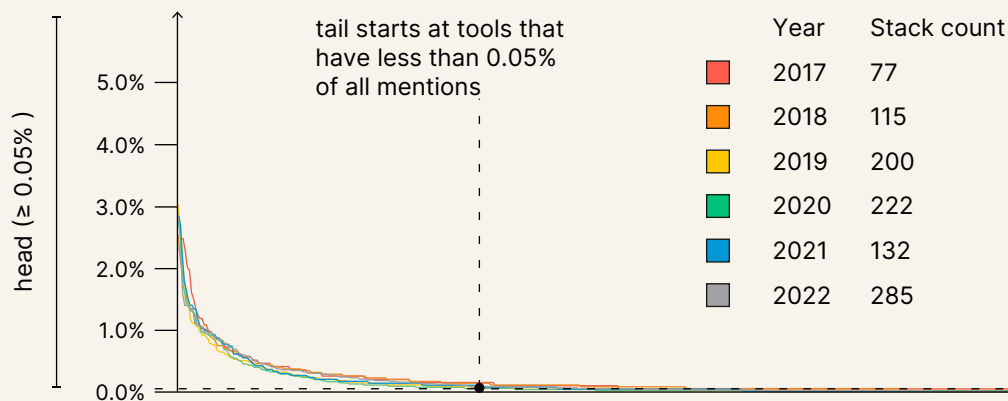
What’s unique about hobby horses is that they don’t need to become profitable businesses to be considered a success. The creators behind them can “win” by using these projects to learn new skills and technologies. They may build their personal brand. They may contribute to larger open-source movements in their space. Ultimately, it may help them get a great job and advance their careers. And in a very antifragile, evolutionary way, their micro-contributions help advance the industry.

This is the long tail from a conceptual perspective. But how is it reflected in tech stacks and share of market?

The long tail is bigger and more prevalent than you might imagine

To better understand the representation of the long tail in martech stacks, we examined 1,100 real-world stacks collected over the past five years¹ and counted how often individual solutions were mentioned.

The martech long tail (2017-2022)



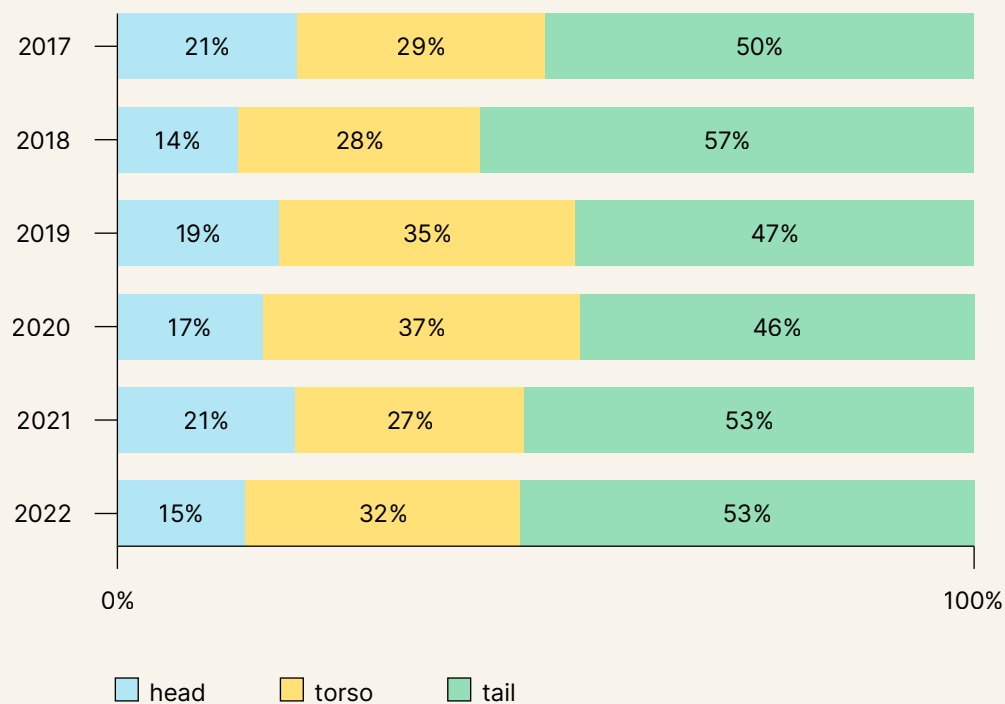
Source: MartechTribe

¹ Across 16 industries, roughly the same sources, Stackies awards, CabinetM, and martechtribe.com

As one would expect, about 260 solutions generated 80% of the mentions — mostly products from the head and torso. Around 2,100 solutions were responsible for the remaining 20%, almost all of them from the long tail.

Now, you might suspect that the number of long tail solutions in stacks would be decreasing over time. But when we segmented the stacks by the year in which they were submitted, we actually saw a pretty consistent balance across head, torso, and tail apps year-over-year.

The martech long tail (2017-2022) - % of mentions



Source: MartechTribe

So not only do we not see consolidation in the industry — by count of tools. We don't see consolidation by raw count within most stacks either.

Now, that's not to say there aren't other kinds of consolidation that happen in martech stacks, such as feature consolidation that shifts workloads from specialist tools to broader horizontal platforms. But as

tail

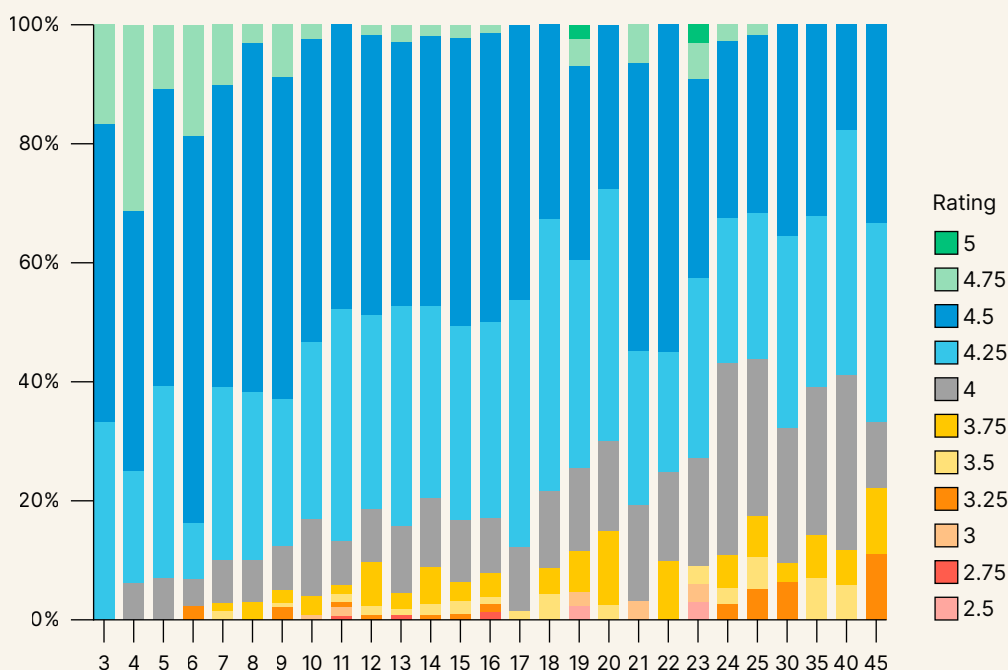
some long tail apps get consolidated within stacks, other long tail apps — perhaps for new and different needs — are adopted behind them.

This continuous renewal of tech stacks mirrors the continuous renewal of long tail solutions in the market.

For another view of the long tail, we enriched our martech landscape dataset with data from [Clearbit](#) and [G2](#). Clearbit gave us insights into the approximate age, size, and revenue for these martech companies. G2 gave us insights into their ratings and reviews — how well liked they are by the marketers who use them.

Younger martech solutions — essentially all startups in the long tail — tend to have higher G2 ratings.

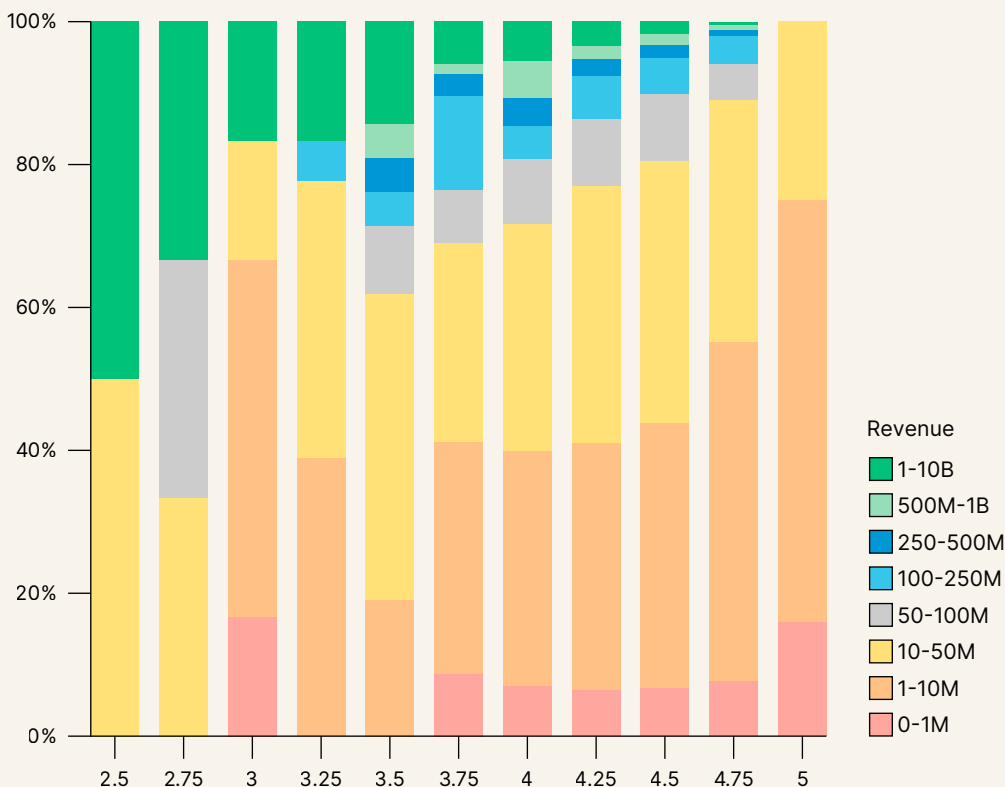
Company age vs percentage of ratings by score



Source: MartechTribe, Clearbit, & G2

Similarly, martech solutions with lower revenue — those definitionally in the long tail — are also generally liked better than the larger solutions in the head and the torso.

Company rating vs revenue



Source: MartechTribe, Clearbit, & G2

Perhaps this shouldn't be surprising. People launch startups because they believe they can serve a set of customers better than the incumbents. Higher ratings are a signal that — at least at a small scale — that's true.

Similarly, other long tail martech companies — as measured by revenue — that have a vertical, regional, functional, or ecosystem specialization can have an advantage over horizontal solutions by focusing on a much more narrow target audience.

Of course, these are averages. Your martech mileage may vary. There are certainly many long tail solutions that suck and large horizontal solutions that are beloved.

The long tail complements large platforms and suites

As we showed in the previous section, the composition of stacks has maintained a relatively consistent balance of head, torso, and tail martech apps over the past six years. In many ways, this is the context of consolidation — or lack thereof — that most marketers should care about.

If you're waiting for the martech market to dramatically consolidate as a path to ultimately consolidating your own martech stack, you might be waiting a long time. It's better to have a strategy for consolidating — or, as we suggested earlier, *rationalizing* — your stack in the face of a sprawling market.

It's unlikely that the primary tenet of that strategy should be eliminating all long tail apps from your stack. Going back to our framing around use cases, it's more important to understand where select long tail apps can be productively added to your stack as a complement to your larger solutions from the head.

When should you add long tail apps to your stack?

The obvious answer is when you need a specific function or feature to deliver on an important *use case* that isn't doable — or isn't doable in a way that is good for both the employees producing the use case and the employees or customers consuming it.

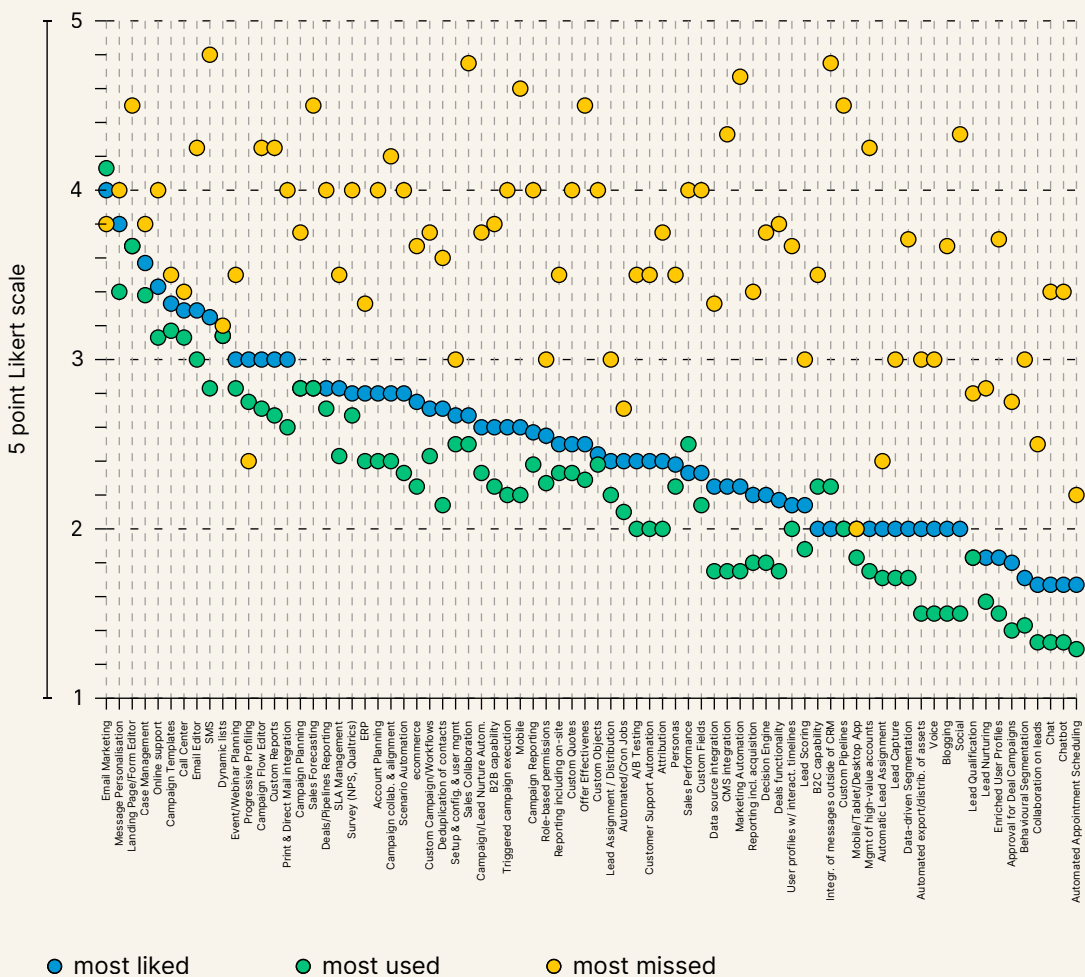
Where this gets tricky is when a larger platform or suite in your stack technically has the ability to deliver that function or feature — but marketers consider it subpar in the production process or experience delivered on the other side.

There's also the very real possibility that they are simply unaware that an existing product in their stack can do what they need. This is a common problem in martech enablement, where we're often not doing enough to teach, train, and empower staff on our stack. For the moment, let's assume that we're evaluating the *reality* of a particular function or feature, not its perception (or lack thereof).

CRMs and marketing automation platforms (MAPs) are two examples of large martech platforms and suites in the head that have consolidated many features and functions in their products over the years. On average, these companies have been around for more than 15 years each.

We surveyed 147 marketers about the features in their existing CRM and MAP solutions. They indicated among hundreds of features which ones they like, use, or miss in performing their daily jobs. We used a Likert scale, from 1 to 5, where “1” was least liked, used, or missed and “5” was most liked, used, or missed.

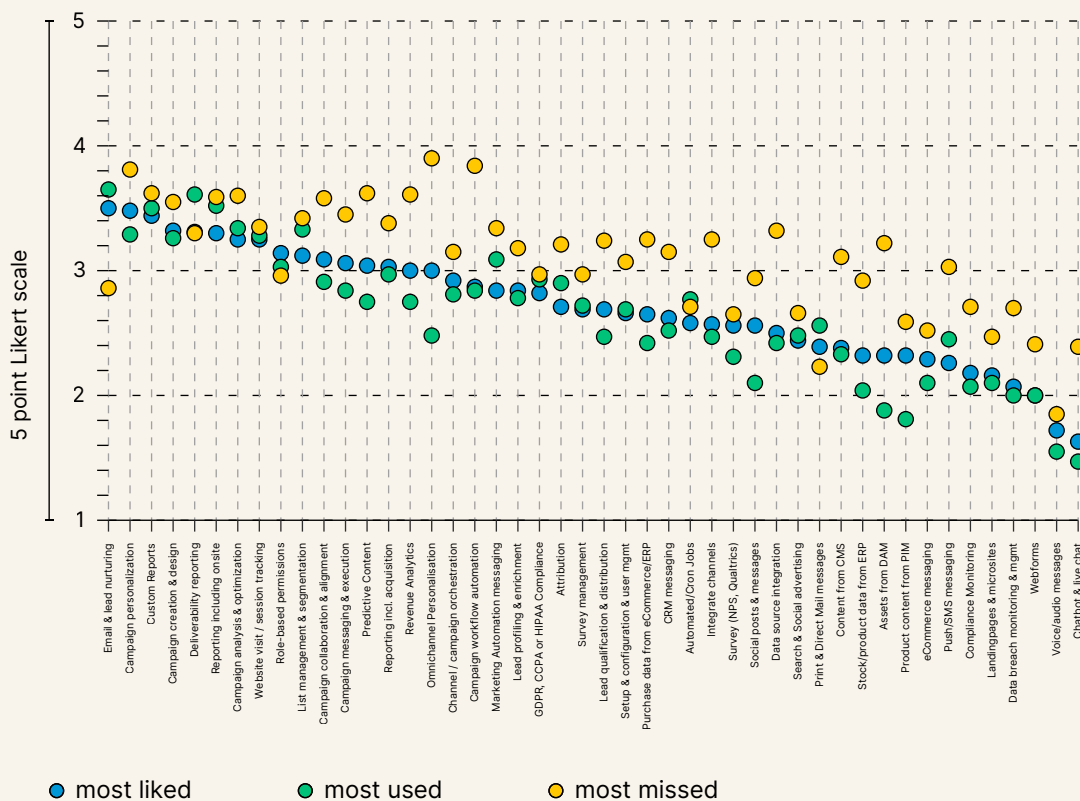
CRM features in existing solutions (by preference)



Source: MartechTribe

Note: Survey conducted to 147 marketers.

MAP features in existing solutions (by preference)



Source: MartechTribe

Note: Survey conducted to 147 marketers.

With both CRM and MAP, we saw a similar pattern. When sorting the results on “Most Liked” — the declining blue line — we see that it crosses the neutral score of a “3” relatively quickly. This moves in parallel with the green line that represents “Most Used” features, which generally falls below the ratings for what marketers like. Not surprising that people avoid the features they don’t like.

What is more surprising is how few features are well-liked and frequently used. This clearly is a major contributor to the problem of utilization.

The yellow dots of “Most Missed” features correlate with what is liked and used in marketing automation, but not so much in CRM. We take this to mean that MAPs are probably more homogenous in their capabilities than CRMs at this stage. (Note that missed features might technically be available in the product, but not realized or configured for these users.)

In short, users often use and like only a portion of the available features and functions in their large software solutions. And there are plenty of cases where they feel they're missing features or functions — at least for how they apply to their use cases — from those platforms and suites.

This is where long tail solutions tend to be adopted to plug these gaps. Since many functional specialist apps and ecosystem apps in the long tail focus on doing one thing really well — and, on average, are more liked for what they do — they can be incredibly effective at solving the use case that drives their adoption.

We see these long tail solutions as more complementary than competitive to those larger platforms and suites. One of the key reasons is that large solutions in the head of the market are typically now more open platforms than closed suites. They're designed to integrate data and workflow from other products in the long tail. Indeed, the whole segment of *ecosystem software* in the long tail is explicitly built around these platforms.

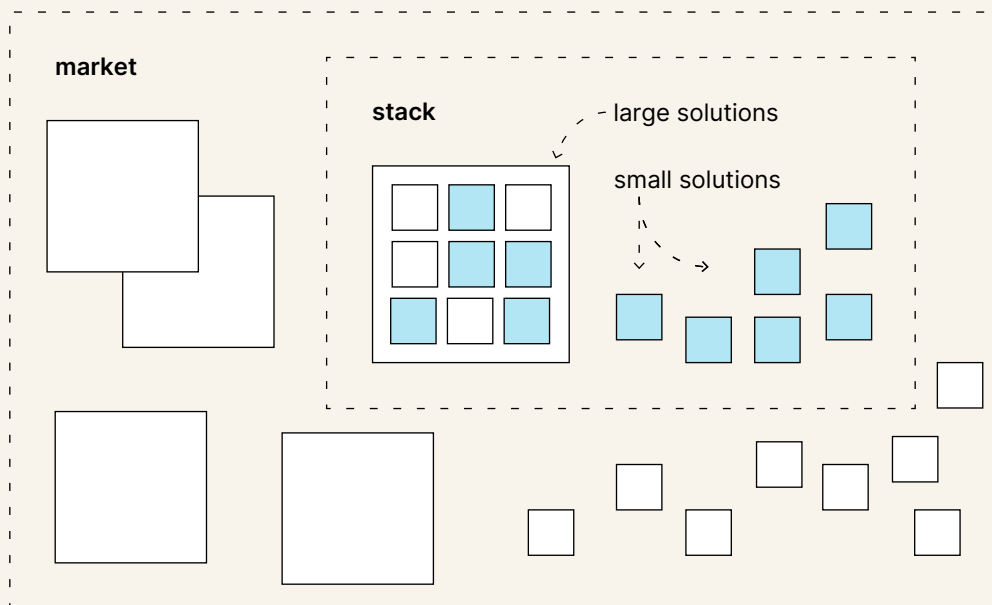
Fair to say that both large and small solutions have a role to play in martech.

Drifting toward a composable landscape

Currently, we view stacks as a set of software products, more than a collection of features and functions. But as we approach marketing technology more through the lens of use cases, it's those individual features and functions that enable us to deliver the capabilities and experiences we envision.

The right feature for a use case can make a difference in its success or failure.

Martech atomization and aggregation



Source: MartechTribe

We see this driving a slow but steady change in the martech industry: the rise of “composable” architectures. Automations, apps, workflows, customer experiences, AI agents, and other kinds of digital solutions can be created by combining data and services from multiple products and data sources to serve bespoke use cases.

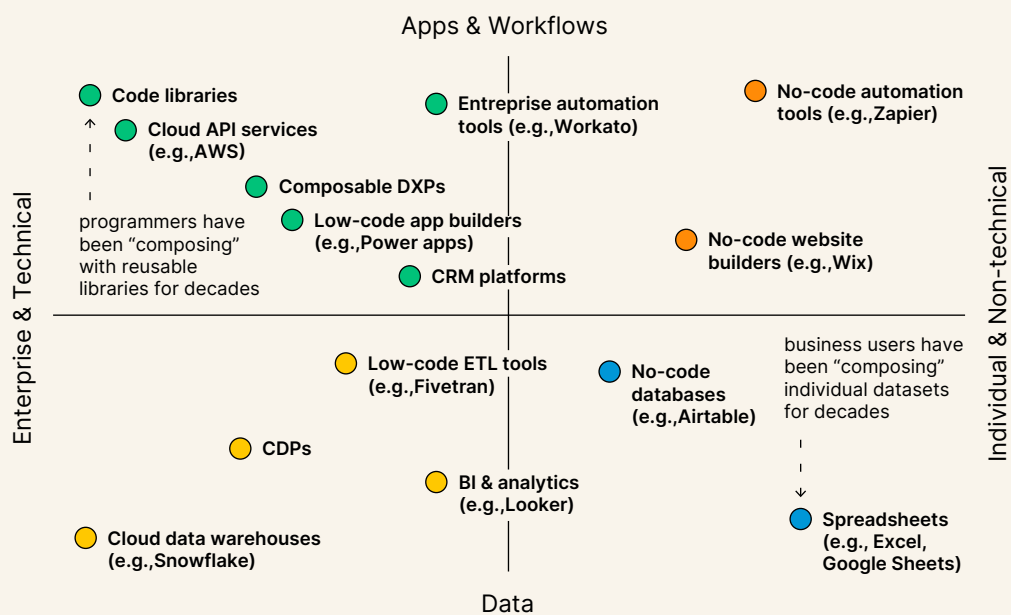
Marketers apply the best features to each particular use case, independent of the software products in which those features are hosted. Instead of “best-of-breed,” we think of this approach as “best-of-feature.”

While composability may sound like a strange new concept to many marketers, the truth is that we’ve already embraced degrees of composability in our stacks for many years.

Software developers compose apps by pulling in reusable libraries or calling API services in the cloud. On the other end of the spectrum, business users compose spreadsheets by pulling in data from many different sources, remixing it into custom-tailored models and reports. No-code website builders such as Wix and Webflow let non-technical

marketers compose sites and web apps. No-code and low-code automation tools such as Make, Workato, and Zapier make it easy to compose workflows. The growing market presence of composable CDPs and composable DXPs are a further testament to the mainstreaming of composable thinking in marketing technology.

Spectrum of composability



Source: chiefmartec

Note: Products mentioned above are only approximate examples.

With the rise of composable approaches, companies can leverage larger open platforms in combination with specialized long tail solutions to craft their digital operations and customer experiences at a conceptual layer above individual software products.

While we're still in the early days of what these composable architectures will grow to become, a rapidly emerging pattern of aggregation in martech stacks — which we'll cover in the next chapter — is ushering us on our way.

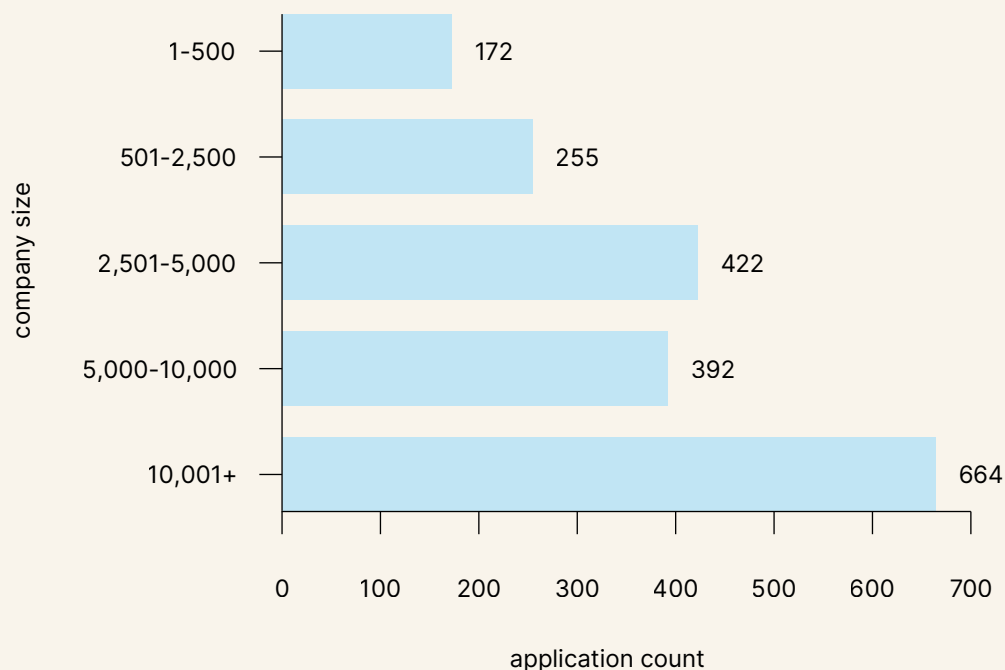
If the market continues to evolve in this direction, we expect to see a robust and productive long tail in martech for many years ahead.

3. Trends in Martech Stacks

Stacks remain large, and not only in martech

The [2023 SaaS Management Index](#) published earlier this year from Zylo, a leading SaaS management platform, shows that even small to mid-sized companies still have hundreds of SaaS subscriptions on average.

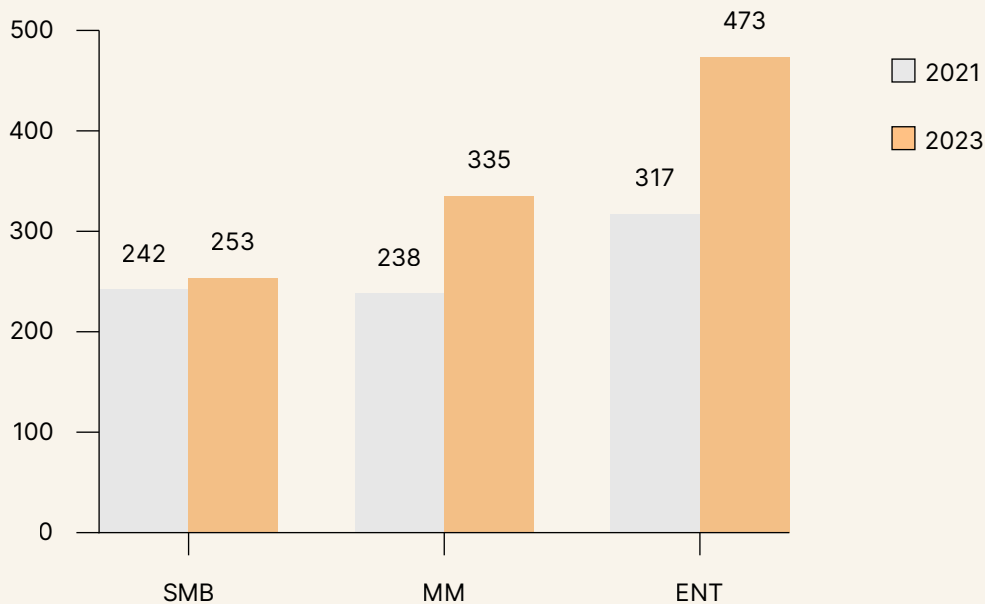
Average number of SaaS subscriptions by company size



Source: Zylo

Similar data from the SaaS management platform Productiv and their [2023 State of SaaS](#) report, shows that SaaS subscriptions have grown at companies of all sizes from 2021 to 2023.

Average SaaS portfolio size



Source: Productiv

Note: Small and Midsize Business (SMB): 11 to 100 employees; MidMarket (MM): 101 to 1000 employees; Enterprise (ENT): 1001 or more employees

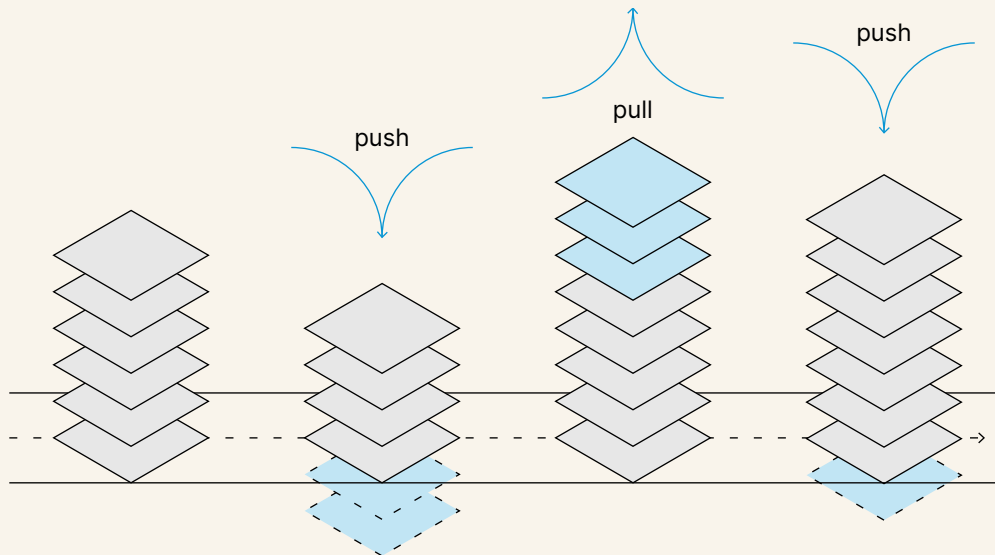
That said, Productiv has reported some pullback and “rationalization” across the stack over the past year. You might be surprised to learn that they found marketing now has a smaller set of SaaS subscriptions than IT, engineering, operations, and sales.

As with the overall martech industry, the dynamics and trends in companies’ martech stacks are a paradoxical balance between opposing forces. Financial efficiency is pushing harder than ever for stack consolidation, while disruptive innovation triggered by AI and ever-evolving customer behaviors continues to require investment in new and emerging technologies.

CMOs and marketing operations leaders are squeezed between two different kinds of competitive pressure: greater efficiency and faster innovation.

A job as a sailing instructor at a Caribbean resort sounds like a great alternative career right about now, doesn’t it?

The push and pull forces in stack growth



Source: chiefmartec

We do see patterns of aggregation and composability opening up a path through these woods. But let's first take a closer look at consolidation and utilization.

Consolidation and utilization are important, but not the full story

2023 has been a year of significant budget pressure for marketing, due to macroeconomic uncertainty and growth performance challenges. [The Fall 2023 edition of The CMO Survey](#) reported a 15% drop in marketing budgets as a percentage of company revenues, from 10.9% to 9.2%.

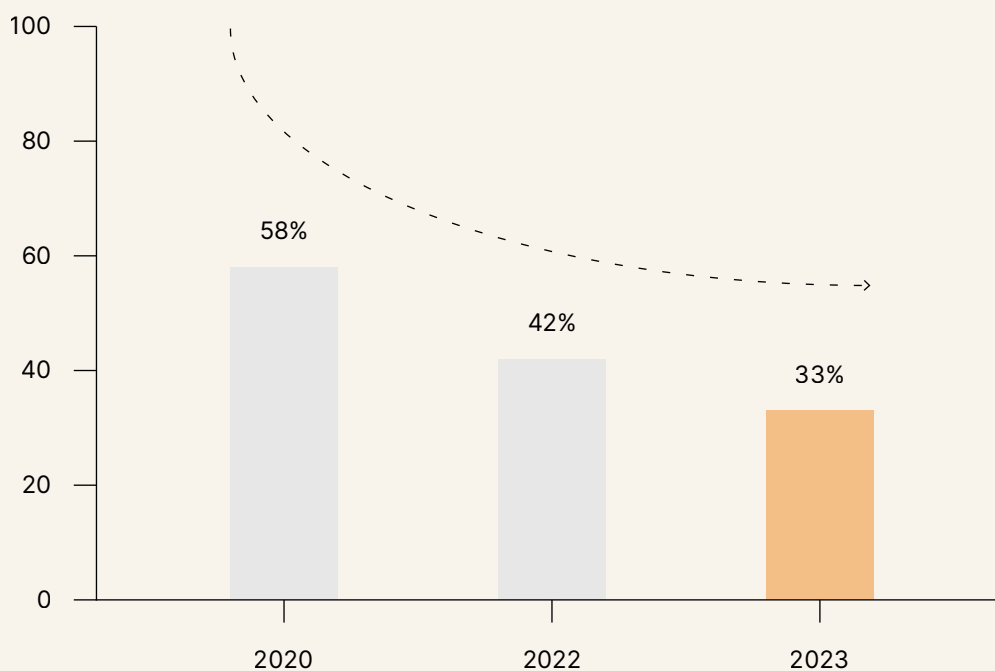
While marketers are modestly optimistic about 2024 — generally an optimistic crew by nature — budgets are likely to remain tight. In The CMO Survey, 52% of marketing leaders reported increasing pressure

from the CFO — more than from the CEO or the Board. The CFO is pushing marketing to demonstrate the impact of marketing actions on financial outcomes.

Martech investments are right in the crosshairs of this scrutiny.

The 2023 Gartner Marketing Technology Survey had a shocking finding that most large marketing organizations feel they are utilizing only 33% of their existing martech capabilities — a dramatic drop from the already worrisome 42% in 2022 and 58% in 2020. Sentiment is clearly going the wrong way.

Trend of martech utilization



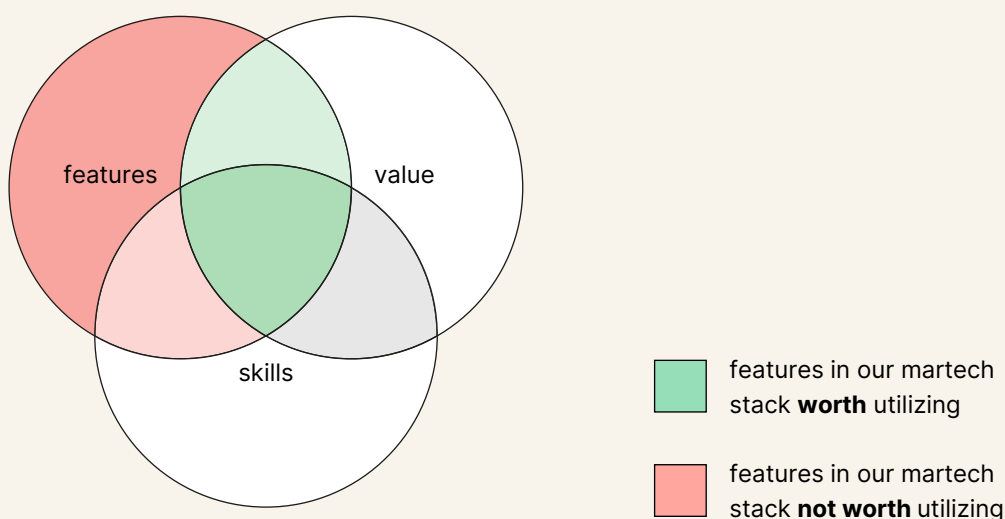
Source: Gartner

Because Gartner also reported that their client organizations spend 25.9% of their marketing budgets on technology, you can draw the logical conclusion: cut out the 67% of the stack you're not using and pocket the savings.

Unfortunately, it's not necessarily that simple.

Often the features that marketers are not using are bundled with features that they are using within a given martech product or platform. It's also not clear that utilization as a function of features is the right metric.

The Venn diagram of martech features



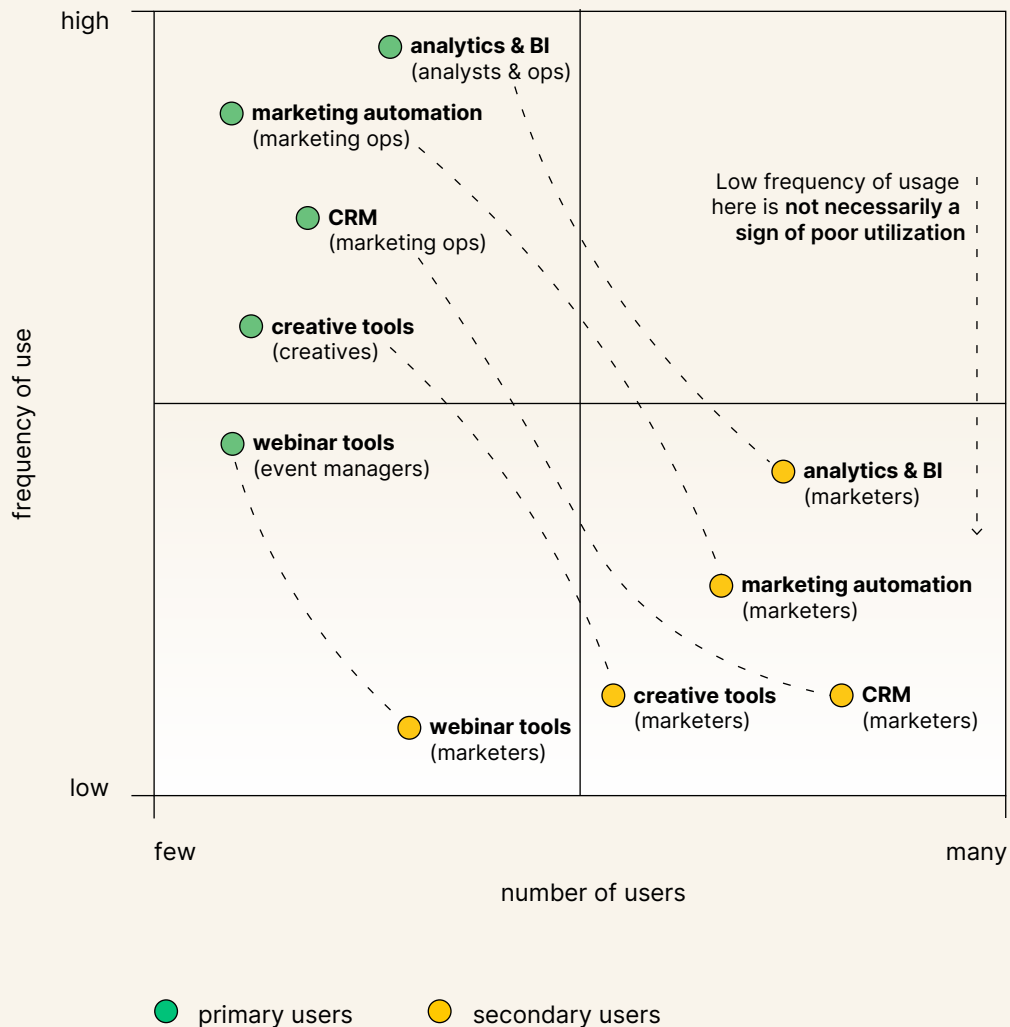
Source: chiefmartec

It's important to keep the focus on customers and business use cases. Which features are going to drive value? This is the essence of best-of-feature thinking.

An easier, less-granular approach to stack consolidation is to identify products or licenses ("seats") within products that aren't being used and seek to cancel or downgrade at the next contract renewal.

However, this also requires a slightly more subtle analysis of seat-based usage. Many martech products have two segments of users: *primary users* who frequently work with those tools and *secondary users* who need to only access them occasionally. However, the use cases in which those secondary users do need access — however infrequently — may still be essential to their work in those scenarios.

Frequency of use of features based on the type of user



Source: chiefmartec

The fire extinguisher in your kitchen hopefully has low utilization. But when you need it, you need it. We saw one example where a company added a product that was only used once per quarter for reconciliation of the marketing budget — four times a year is relatively low utilization!

But given the enormous wingspan of most martech stacks, you will likely uncover tools that can be removed — either because they’ve been abandoned by users or because equivalent functionality is now available through another product in your stack.

This is a high-level heuristic for pruning the dead wood from your stack:

Utilization Measure	Good Utilization	Poor Utilization	Reason for Poor Utilization	How to Remedy
Frequency of use by primary users	Used frequently	Used rarely, if ever	No longer needed	Cancel as unnecessary
			Other product used instead	Cancel as redundant
			Ineffective for job-to-be-done	Replace with better app
Frequency of use by secondary users	Used occasionally	Used rarely, if ever	Not relevant to job	Reduce licenses
			Not clear how/why to use	Invest in enablement
			Rare use is expected	No remedy necessary
Capabilities used	Many features used	Many features not used	Features not relevant	Reduce license tier
				Replace with simpler app
				Okay to not use those features
			Features used in a different app	Possibly eliminate this/that app
			Use of features not understood	Invest in enablement
			Features too hard/complex	Replace or add better UX app
			Features not effective	Replace or add specialist app
			Not well integrated in stack	Integrate or replace
			Legal or governance concerns	Review, implement guardrails

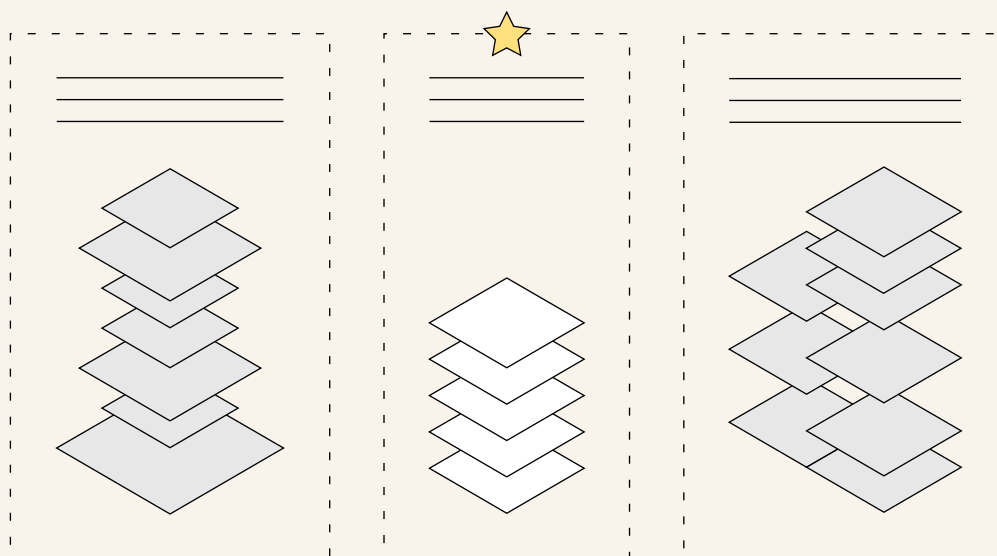
Note that simply removing tools isn't always the right answer to low utilization. If the capability itself is important to your marketing and customer experience, your best option may be replacing a current app with a better (or simpler) one — or making greater investments in internal training and enablement to better use the products you already have.

Consolidation is good. It's like an Occam's Razor for martech stack management: *other things being equal, the simplest stack is best.*

By comparing the stacks of companies with the highest revenue/employee ratio we see that adage confirmed. These stacks do not rely on having the most technically advanced software, instead these stacks keep it simple by ensuring the basics (minimum) are in place to follow the money (company and customer value). They purchase and implement software with clear goals in mind, and focus on those features that support those outcomes.

Martec's Razor

Other things being equal, the simplest stack is best.



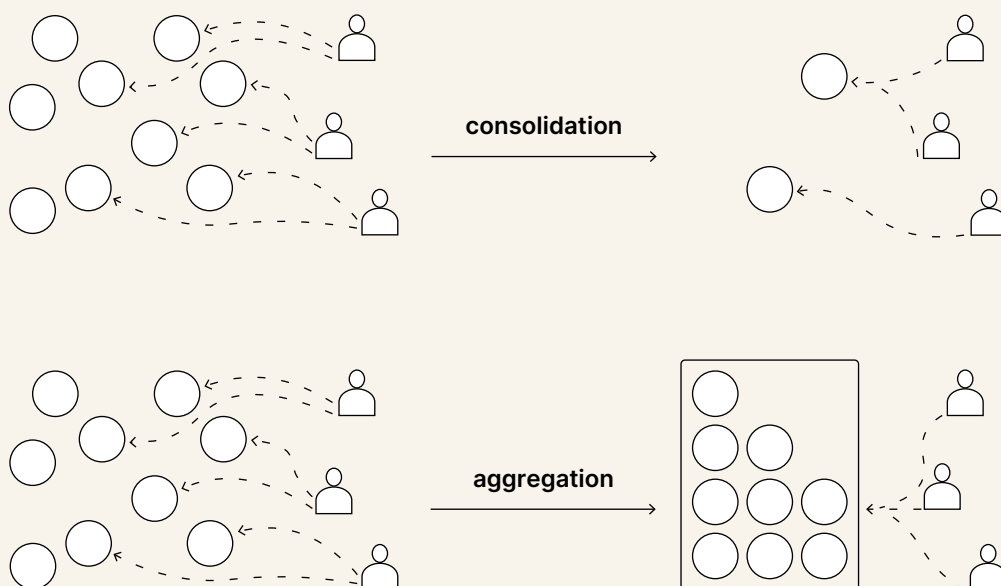
Source: chiefmartec

But in a complex and rapidly changing environment, consolidation alone will only take you so far.

Aggregation as a unifying stack pattern

A more powerful pattern emerging in martech stacks — and company-wide tech stacks in general — is *aggregation*.

Consolidation vs Aggregation

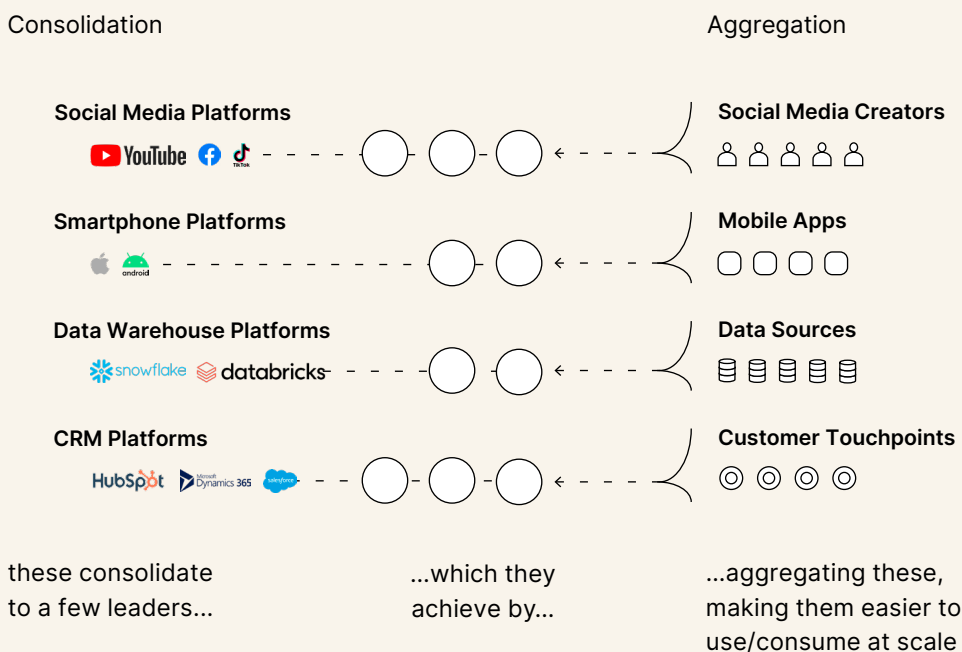


Source: chiefmartec

Whereas consolidation is about reducing a large number of things to a fewer number, aggregation is about making a large set of things easier to consume.

We've taken the term "aggregation" from the concept of [Aggregation Theory](#) defined by Ben Thompson of [Stratechery](#). He developed it as a way to understand Internet businesses that aggregate something — content, goods, services, etc. — from many suppliers to many consumers. These aggregators own the direct relationship with users and have effectively zero marginal costs for adding more suppliers or consumers. Airbnb, Facebook, Google, Netflix, TikTok, Uber, and YouTube are all examples of such Internet aggregators.

Aggregation theory in martech stacks



Source: chiefmartec

Social media platforms such as Facebook, TikTok, and YouTube aren't trying to *consolidate* the amount of creator content in the world. Quite the opposite. Instead, they're enabling people to effectively access an unlimited supply — through a single interface that provides consistency and governance in discovery and delivery. In the other direction, they provide the same benefit of aggregating an audience to their suppliers.

We see a similar pattern emerging inside companies with software platforms that aggregate data and services across the tech stack. They're not trying to reduce the diverse "supply" of data or services across your organization. Rather, they aim to make such diverse and distributed data and services easier to access and use, in a more consistent and cohesive fashion, regardless of how many you have.

There are two models of aggregation platforms: *horizontal aggregation* and *vertical aggregation*.

Vertical aggregation is the classic "suite" approach to business software, albeit with a more open platform ecosystem. They're typically

focused around one or more related departments in a business.

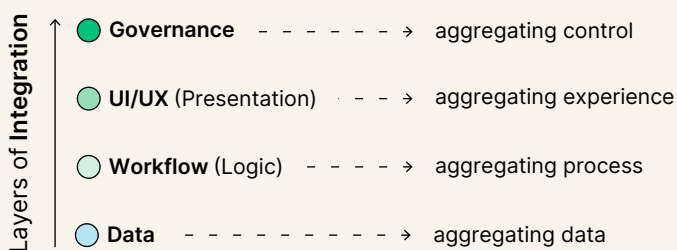
For example, CRM platforms such as HubSpot, Microsoft Dynamics, and Salesforce aggregate customer touchpoints across marketing, sales, and customer service. They bring together data, workflow, employee-facing and customer-facing UI, and overall governance practices within the domain of the revenue organization: marketing, sales, and customer service.

Most previously closed suites have now evolved into open platforms with open APIs and large partner ecosystems of other software companies who integrate with them. These ecosystem partners are both suppliers and consumers of the data and services aggregated by the platform.

In the pattern of aggregation, the marginal cost of integrating one more app or data service to the platform and to any company that adopts it approaches zero.

Horizontal aggregation is a newer model. Instead of aggregating around an organizational department or business function, horizontal aggregation platforms aggregate around a certain layer in the tech stack: data, workflow/orchestration, UI/UX, or governance. They likely span all departments within a company.

Layers of Integration = Layers of Aggregation



Source: chiefmartec

In general, the layers for horizontal aggregation are the same dimensions by which any two software products are typically integrated with each other. An integration can share data, connect workflows, or embed in

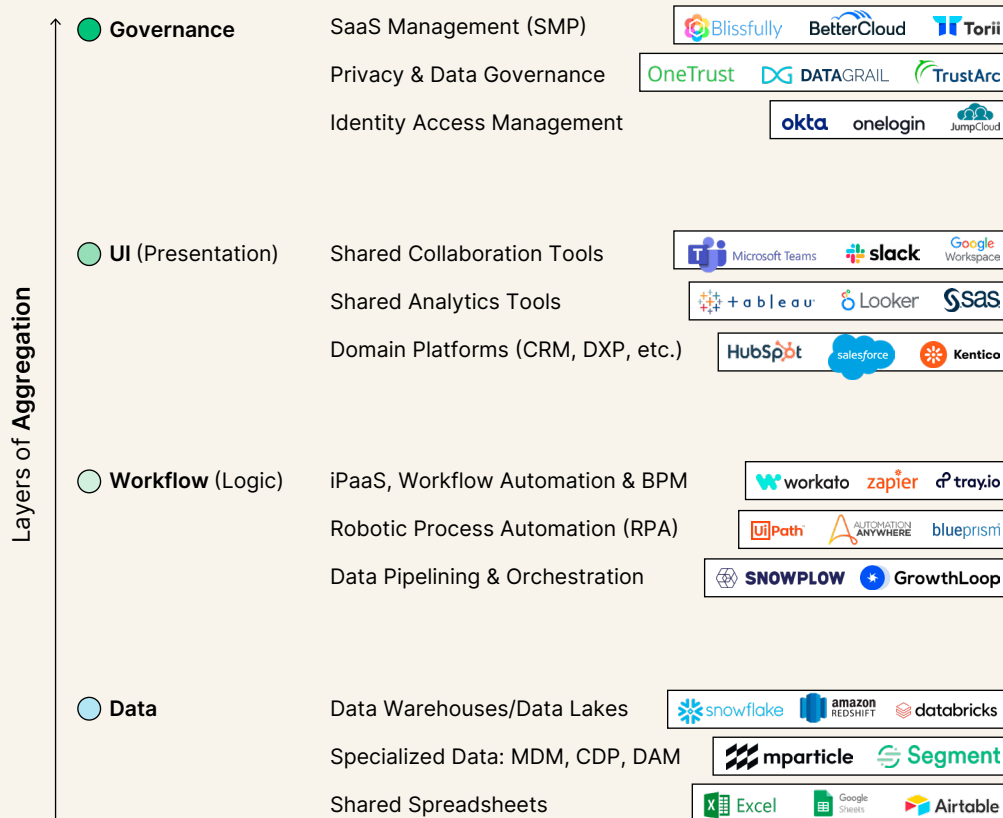
each other's user interface. Integrations can include one, some, or all of these.

A horizontal aggregation platform is different from a point-to-point integration. It integrates *many* software products, serving as an independent broker and referee between them. But it typically only integrates products along the axis of a single layer. A data aggregation platform only aggregates data, not workflow or UI.

The goal of a horizontal aggregation platform is to make it easier for people — or other apps — to contribute to and consume aggregated data, workflow, UI/UX, or governance services.

Here are a few examples of horizontal aggregation platforms at each of these layers:

Examples of Aggregation at each layer



Source: chiefmartec

Cloud data warehouses are a quintessential example of horizontal aggregation at the data layer. The more sources you have supplying data to the warehouse and the more apps you have consuming data from the warehouse, the greater value you get from the warehouse.

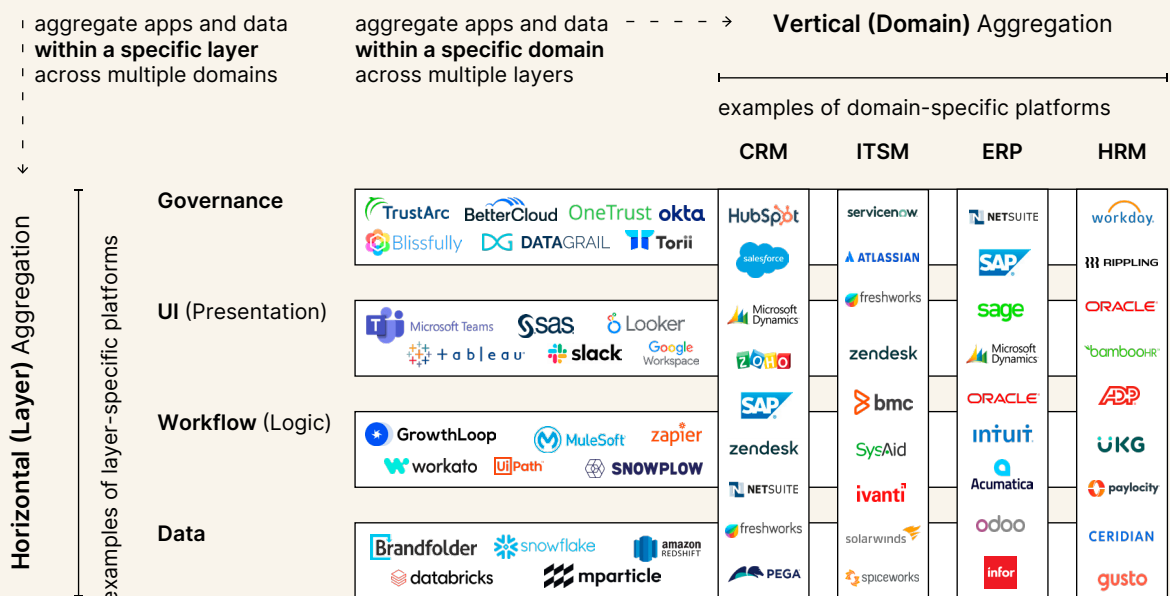
As with Thompson’s Internet aggregators, there is minimal marginal cost to adding more data suppliers or consumers. Swapping out old or underperforming suppliers or consumers also becomes easier, as an aggregator inherently reduces their individual lock-in effects, at least at the layer at which it is aggregating.

We’ll dig more deeply into data layer aggregation in a moment, as it is by far the most dramatic change underway in martech stack architectures today.

However, you might have also noticed CRMs included as examples of domain platforms providing horizontal aggregation at the UI presentation layer. Weren’t they cited as examples of vertical aggregation? Can they be both?

In short, yes. It depends on how they’re being used.

Aggregation patterns in business tech stacks



Source: chiefmartec

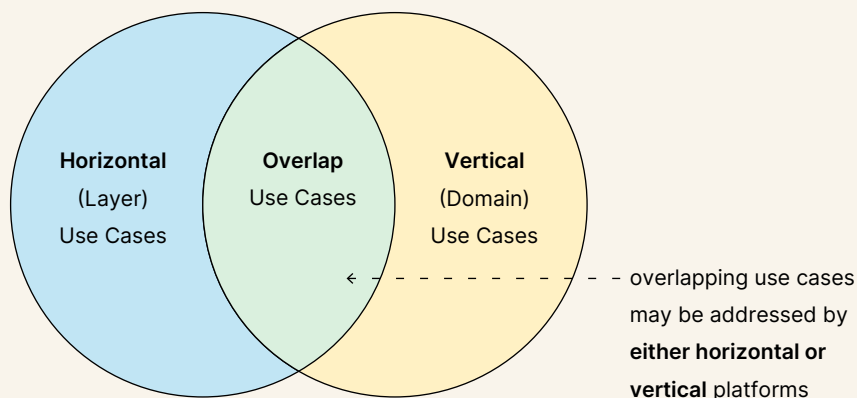
In fact, most tech stacks today include both horizontal and vertical aggregation platforms. However, this doesn't result in as much dissonance as you might think. This is largely because both kinds of aggregation platforms are open — that's key to their value proposition — which enables them to easily exchange data and services with each other too.

While conceptually this is a more complex stack architecture than a Platonic ideal, it actually creates a very flexible technology infrastructure. For any given use case, ops teams have the option to use either kind of platform — or a combination of them — to implement the best solution.

Horizontal & Vertical aggregation use cases

Key **Horizontal** Traits:

- Aggregating around org-wide capability
- Cross-org adoption
- Greater API usage
- Mostly used internally behind-the-scenes
- Consumption-based pricing more likely
- "Guild" alignment



Key **Vertical** Traits:

- Aggregating around department/domain
- "Home base" UX for users in the domain
- Often has customer-facing touchpoints
- Seat-based pricing is dominant model
- "Tribe" alignment

Source: chiefmartec

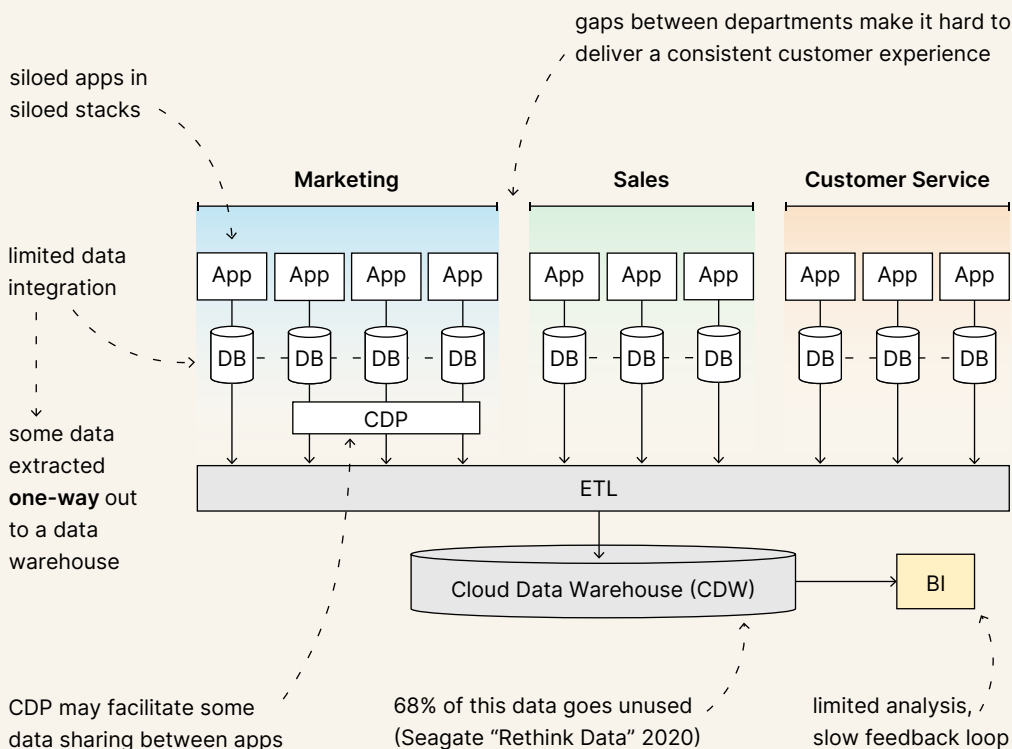
It's the tech stack equivalent of a matrixed organization. It's extremely adaptable to new requirements and new technologies.

Cloud data warehouses = data aggregation

While there are many horizontal aggregation platforms in marketing’s day-to-day operations that you probably don’t consciously think of — Okta as an identity management aggregator, Looker as an analytics and visualization aggregator, Workato as a cross-departmental workflow automation aggregator, etc. — one kind of aggregator has risen to the forefront of martech discussions over the past year: data aggregation through cloud data warehouses.

The past two decades of martech have operated in a tech stack environment where each app had its own private database. Most martech integrations were about exchanging limited slices of that private data between apps.

Old World

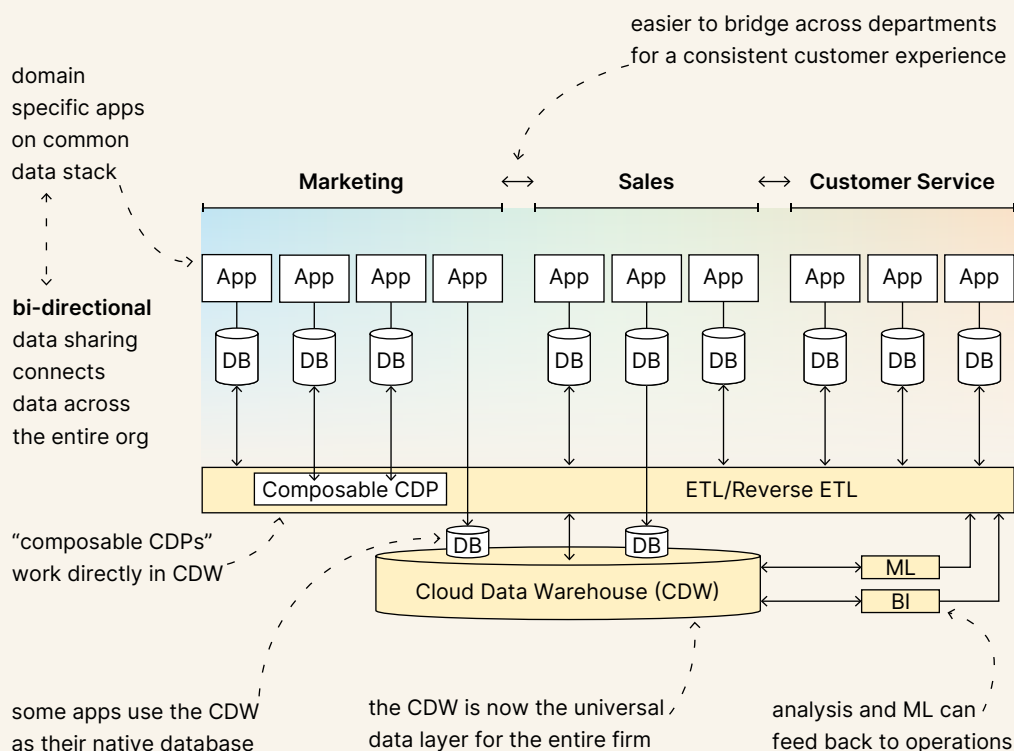


Source: chiefmartec

The original concept of CDPs was to create a centralized exchange and repository for marketing-related data between these apps. In this way, CDPs were one of the first data aggregation platforms, tuned for marketing. But while conceptually that was what marketing needed to bring data-level cohesion to its stack, CDPs were often slowed by having to build and maintain API-level integrations to each and every app that marketers wanted to connect to their CDP.

In parallel to the rise of CDPs, adoption of cloud data warehouses (CDWs) such as Snowflake, Databricks, Amazon Redshift, and Google BigQuery have also been growing at double-digit rates. (For simplicity, we'll ignore the blurry distinctions between data warehouses, data lakes, and data lakehouses.)

New World



Source: chiefmartec

Mostly driven by IT and org-wide data and analytics teams, business apps of all kinds — not just martech — have been under pressure to push their data into CDWs, where it could be more flexibly combined

and manipulated. Classic ETL (extract-transform-load) tools such as Fivetran helped accelerate this movement, but increasingly app vendors have built native CDW integrations.

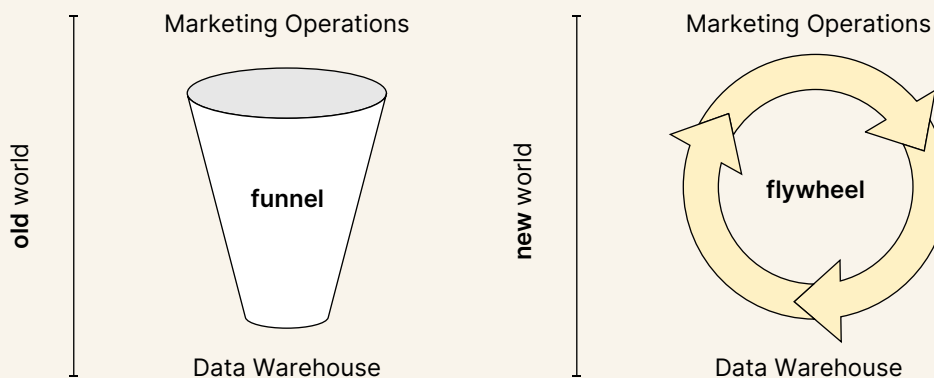
As this gained momentum, CDWs increasingly became a unified data layer across the company. However, originally, this was a one-way funnel — from apps down to the CDW. But then a new category of tools known as *reverse ETL*, such as Census and Hightouch, emerged. They took data from the CDW, and with some flexibility in how it could be modeled and routed, pushed it back up into front-line apps — including martech systems of engagement.

This new bi-directional capability created a tipping point where the CDW wasn't just a unified data layer for analytics — it started becoming a unified data layer for operations too.

Most CDPs have adapted to this new environment by adding support for working with data directly from CDWs, often without necessarily ingesting that data into their own database (a method colloquially known as “zero-copy”). This shift in the CDP industry was defined with the term “composable CDP” — able to compose solutions across multiple data platforms and multiple engagement platforms.

This is a quintessential example of best-of-data: flexibly bringing the right data to the right use case in a customer experience or employee experience.

From funnel to flywheel



Source: chiefmartec

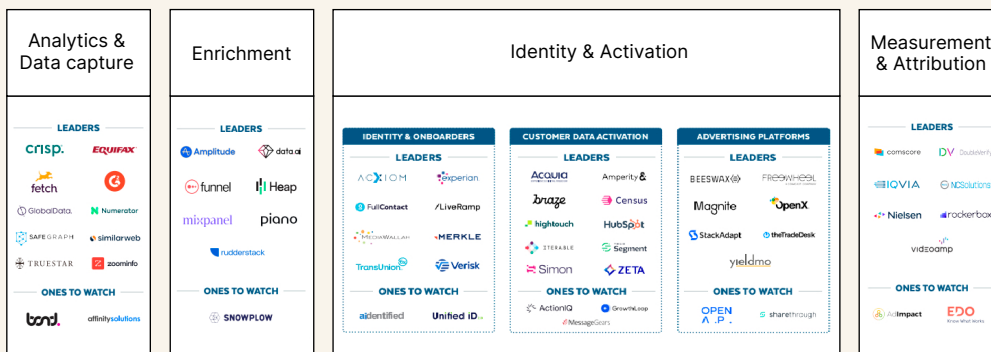
The ability to tap data from across the organization — sales touchpoints, customer service touchpoints, digital product interactions, lifetime customer value models from finance, etc. — for marketing use cases is a huge advantage being unlocked by this new aggregated data layer.

It's perfect timing, as the deprecation of third-party cookies and other changes such as Apple's App Tracking Transparency (ATT) are forcing companies to better leverage first-party data. We expect to see tremendous creativity with how marketers leverage this broader range of first-party data in the year ahead.

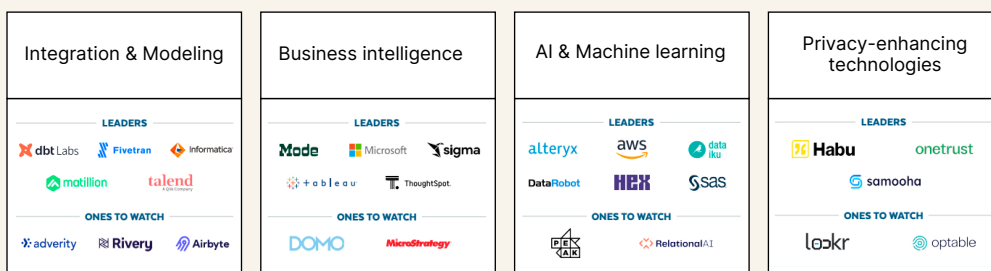
One of the characteristics of an aggregation platform is that it usually attracts a robust ecosystem of other products that build integrations or specialized app functionality for the platform. A great example of this is the ecosystem that is burgeoning around Snowflake, which we expect will continue to grow in 2024.

Snowflake's data cloud ecosystem

Marketing and advertising domain-specific tools and platforms



Data stack foundational tools and platforms



Source: Snowflake

Generative AI chat boxes = UI aggregation

User interfaces have been another horizontal layer where we've seen the pattern of aggregation grow over the past decade. Task switching across multiple apps, each one in a different browser tab, creates enormous cognitive load and a terrible drag on productivity. Aggregation at the UI layer attempts to solve this by bringing more features, data, and content into a common interface.

For example, team communications platforms such as Slack and Microsoft Teams have aggregated notifications from many other apps. Collaborative workspaces such as Airtable, Excel, Google Sheets, Notion, and Smartsheet have aggregated data-driven planning and project management. These apps collect inputs from across a company's tech stack and bring them into a single interface for users.

One of the reasons we identify CRMs as a horizontal aggregation platform — in addition to a vertical one — is because they often serve as the primary UI in which sales and marketing users spend their day. This is an area of intense competition, with marketing engagement platforms and sales engagement platforms also vying to be that primary interface for marketers and salespeople respectively.

Human attention remains our most constrained resource. Platforms that can aggregate it — inside internal business operations as much as externally with consumers — have enormous power.

Aggregation of user experience is where we believe AI may have the greatest impact on the martech stack.

Already, LLM engines powering the current generative AI wave are proving adept at absorbing tremendous amounts of content and data and providing a natural language interface to let people query it for answers and insights. The quality of the results is often much, much better than what traditional search engines have been able to deliver. Indeed, this is why the launch of ChatGPT was such an existential crisis

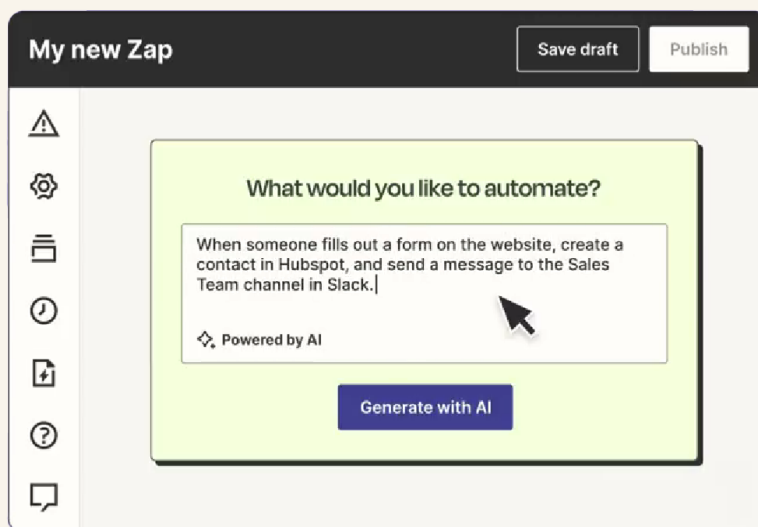
for Google, who quickly responded with their own Bard and now Gemini generative AI engines.

Companies have connected private versions of these LLMs to their own data and content repositories to enable employees to tap those resources with a whole new level of depth and immediacy. This is one of the opportunities that Microsoft Office and Google Workspace clearly see as advantages for them as incumbents with all the documents, spreadsheets, slide presentations, and email threads that organizations have amassed over the years. Layering AI-powered assistants and co-pilots on top of a company's content repositories can unlock incredible latent treasure buried within.

A vast sea of additional marketing and sales related content stored in knowledge bases, wikis, blogs, transcribed calls, podcasts, webinars, video walkthroughs, resolved support tickets, and more can now be accessed through a simple chat box interface too.

Generative AI chat boxes are poised to be one of the best UI-layer aggregation platforms yet.

Zapier's AI-powered Zap Builder



Source: Zapier

Given this, numerous industry experts predict that knowledge management may be the killer app of generative AI. But there’s even more happening here than just making mountains of digital content more accessible and useful.

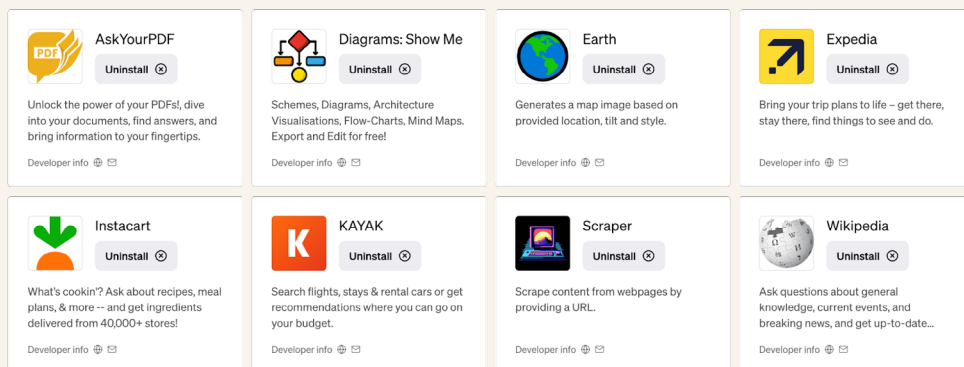
Generative AI tools are also quite good at translating natural language requests into SQL queries, small Python programs, and other “code” that can look up and analyze data from databases and business intelligence platforms.

Many other martech products are adding these generative AI chat boxes to their products to let users simply *describe* what they want and then have the software figure out how to do their bidding. It short-circuits the need for users to learn the often intricate steps required in navigating menus and sequences of fields and buttons to accomplish something.

As Dharmesh Shah, co-founder and CTO of HubSpot eloquently put it, it’s a shift from point-and-click to describe-and-done. It’s a true paradigm shift in software user interface.

But here’s the really wild part: these AI-powered chat boxes don’t have to be limited to operating within a single app. In fact, with ChatGPT and its plugins, we already see how an AI chat interface can broker requests across multiple apps behind the scenes.

ChatGPT plugin store



Source: OpenAI

The examples of ChatGPT and its plugins are for aggregating — to use our term — public services on the Internet for booking restaurants, filling shopping baskets, and querying Wikipedia. But the same concept can be applied across multiple tools within your internal tech stack. You can see an example of this with [Zapier's AI-powered Zap builder](#).

Zapier's AI-powered Zap Builder

Example

You can enter prompts like:

- When a customer makes a payment in Quickbooks, find the customer's open deal in Hubspot, then mark it as closed.
- If someone posts in Discord, send me a notification in Slack.
- After I get a new form submission, look for a row corresponding to the submitter's email address in Airtable, then check the "Submitted" field checkbox.

Tip

Describe your workflow using plain language like "When X happens, do Y, then do Z." You do not need to use technical language. If you know which apps you want to use, include those in your prompt.

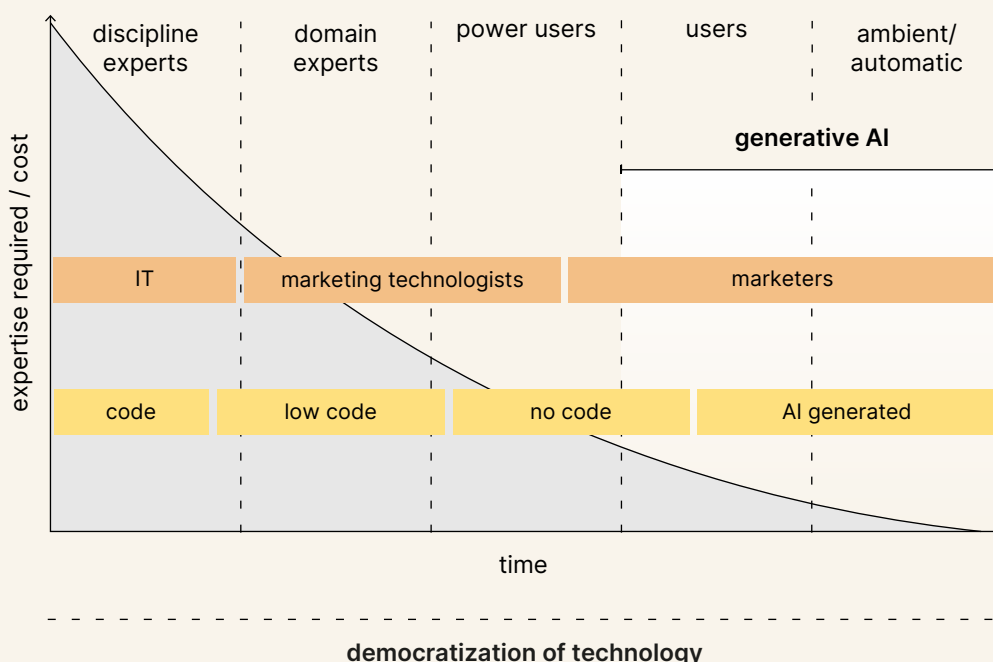
Source: Zapier

Such AI-powered chat interfaces that can take actions across multiple tools within your tech stack have the potential to become the ultimate UI layer aggregators.

AI agents = workflow aggregation

AI-powered, natural language interfaces will be a huge force for democratizing access to analytics for non-technical marketers. Previously, many data-driven questions that popped into marketers' heads required them to seek help from analysts or marketing ops specialists to answer them. This often incurred a significant time lag — file a ticket in a queue — and was expensive, as the time of those experts who needed to perform the work was quite costly.

Democratization of technology



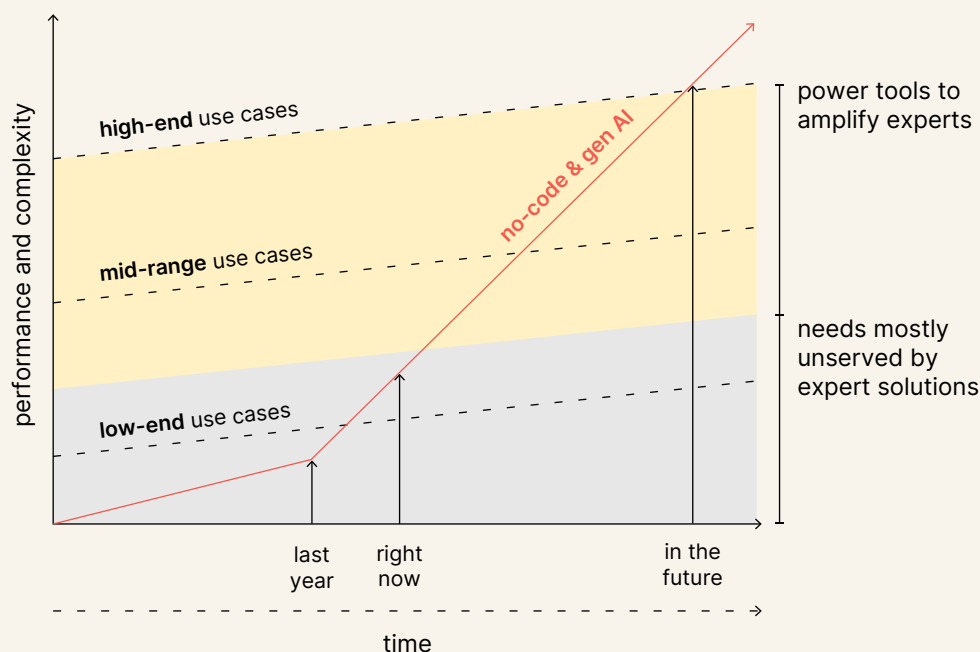
Source: chiefmartec

Empowering front-line marketers to be able to self-service more of these needs enables many of those questions to be answered much more quickly and much less expensively. But arguably an even bigger benefit is that it widens the funnel for more questions to be asked and answered.

Because marketers have known how much time and effort it takes to chase down an answer, many questions they contemplated went unasked. An AI tool that can now serve as a desk-side analyst for marketers — even if merely an intern-level analyst — will encourage marketers to ask more questions. This will lead them to more analytical approaches and insights because they will have the capabilities to be more analytical.

It's important to acknowledge that these self-service AI analytics solutions will not bring the same level of expertise that a professional human analyst would. For more complex queries or those that require more engineering to even access the right data in order to answer the query, human expertise will still be needed.

No-code & generative AI — Classic Disruptive Innovation



Source: chiefmartec

But this is where Clay Christensen’s model of disruptive innovation is particularly insightful.

First, disruptive innovations such as AI-powered self-service analytics start out by serving the “low-end” use cases — in this case, relatively simple analytics requests. They can’t match the capabilities of how “high-end” use cases are served, such as with human expert analysts. But over time, the technology improves and is able to tackle more mid-range and eventually high-end use cases. Given the pace at which generative AI is advancing, we expect this may happen more quickly than in any other disruptive innovation adoption curve marketing has seen to date.

But second, the impact of unlocking the low-end use cases that were previously “underserved” — because it would have been too expensive to address them — can be significant. This is where we expect to see a lot of net new value created from existing assets with current martech stacks.

This power of intelligent natural-language interfaces to make more capabilities accessible to non-technical — or, more accurately, non-specialist — marketers goes far beyond analytics.

The examples from Zapier’s AI-powered Zap builder that we presented earlier show how creating simple workflows and automations can also be done through these interfaces. While guardrails need to be in place to control the permissions of who can do what, the ability for marketers to optimize their day-to-day work by simply telling AI agents what they want to have happen will be an incredible productivity boost.

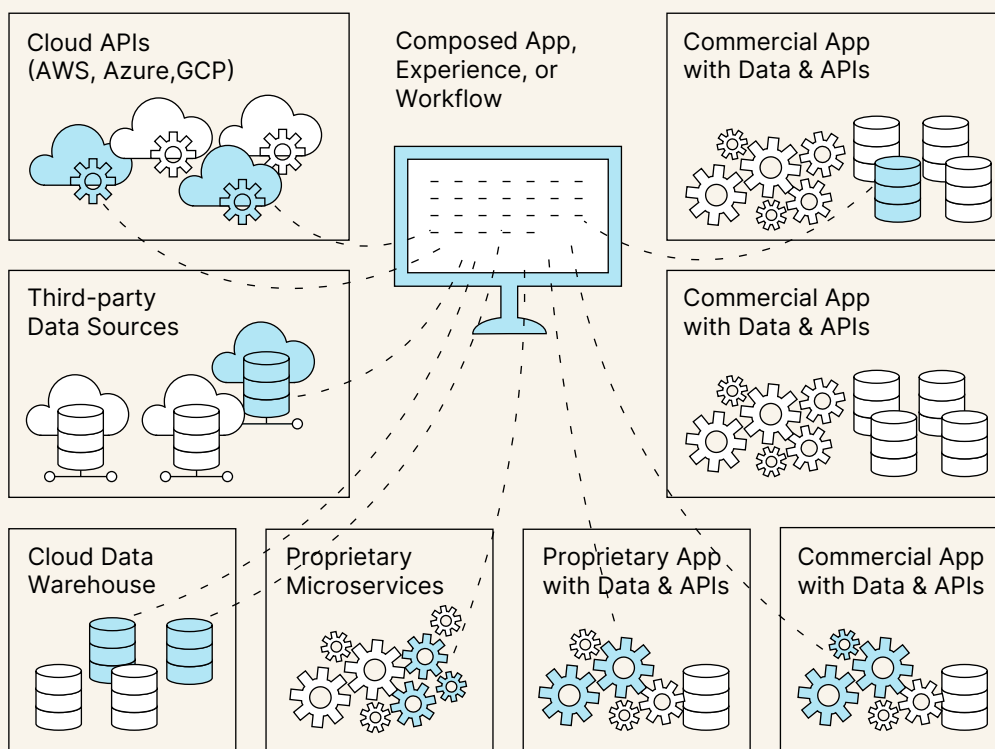
This ushers in a whole new generation of “no code.” Previously, even if a tool had a so-called no-code interface — perhaps a way to visually assemble a workflow on a drag-and-drop canvas without coding anything in a programming language like Javascript — users still needed to have a sense of programming logic to be able to design the proper step-by-step flow. It was programming, albeit simplified visual programming.

But this new generation of AI-powered no-code interfaces moves us beyond the need for a human to assemble that step-by-step programming logic. Instead, a user can declaratively state the outcome they want and let the AI figure out the steps necessary to do it.

More APIs enable a composable best-of-feature future

APIs are the key to such AI-powered agents working across app boundaries. While many martech products have already significantly expanded their API offerings to create or participate in platform ecosystems, we expect to see even further API growth in the year ahead to further enable this new generation of AI capabilities.

A composable environment



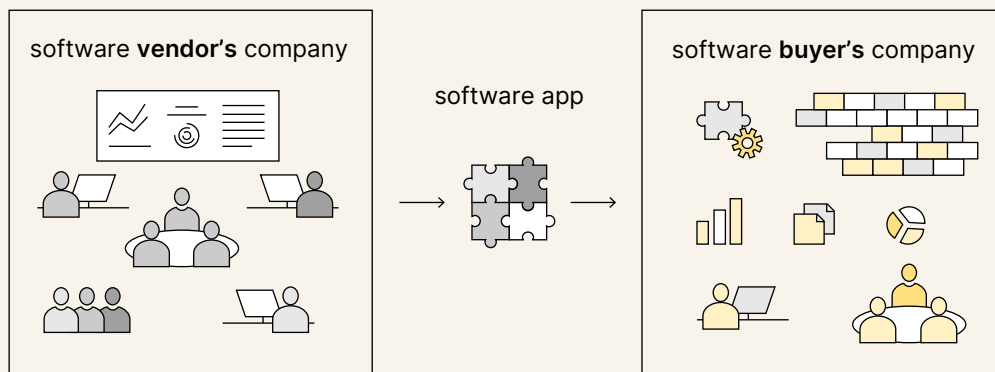
Source: chiefmartec

Let's return now to the concept of composability discussed in the previous chapter. When you stop to think about it, APIs are the perfect building blocks for a best-of-feature architecture. And while best-of-feature implementations of use cases may be more complex — mixing

and matching components across software product boundaries — AI agents and co-pilots are poised to significantly simplify the human interface to building them.

We believe this will catalyze a significant change in the way companies think about their martech applications.

Conway's Law



Conway's Law

The design of a software app by a vendor will **reflect the way it works** — its organizational structure, beliefs, culture, and philosophy.

Inverse Conway's Law

Adopting a commercial software app often requires a company to **adapt the way it works** to fit the design of that software app.

Source: chiefmartec

A principle known as *Conway's Law* suggests that a software app tends to reflect the company who built it — its organizational structure, beliefs, culture, and philosophy.

But there's an interesting corollary for packaged software products. A software product reflects the organization of the vendor who built it. It does not, however, necessarily reflect the organization of the company who buys it. Very often a company that buys a non-trivial software product must adapt to fit the "opinion" of that software.

This is what we've coined as *Inverse Conway's Law*: adopting a commercial software product often requires a company to adapt the way it works to fit the design of that product.

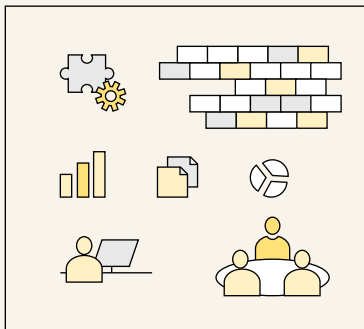
That’s not inherently a bad thing, if a buyer’s company needs to shift the way it works to adapt to new changes in the market. Being “shaped” by a software product that alters how the company operates can be a major benefit. They’re paying for software, but what they’re really buying is business transformation.

But as companies become more digitally mature, they increasingly seek to bend the software in their stack to their own vision.

The future of digital operations

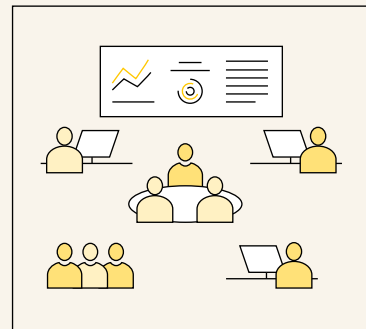
Inverse Conway’s Law

adapt your business operations to the design of a software app

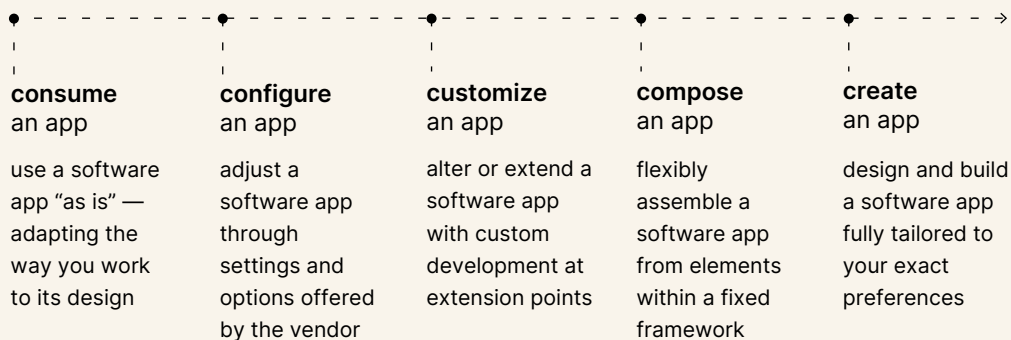


Conway’s Law

design a software app to the operations of your business.



degrees of freedom in your digital operations



Source: chiefmartec

They’re no longer satisfied to simply consume a packaged software product. They’ll work to configure it, but may chafe against the

constraints of what was made configurable or not configurable by the vendor who developed it. They may try to customize it, where possible. But they are limited by the extensions points the vendor opened up to enable such customization.

This is what drives teams to start composing their own apps. “Apps” may be overstating it, as initially these may be simple workflows and automations that cross app boundaries. More advanced teams have been able to take this even further, effectively composing their own software on top of these packaged products, to gain further degrees of freedom in their digital operations and customer experiences.

But now AI agents and co-pilots are starting to democratize the power to compose and create apps to a much wider population.

The result will be a shift away from companies being constrained by *Inverse Conway’s Law* to a state where they more frequently embody their own cases of *Conway’s Law*: the software they compose is a reflection of the way they want their company to operate and the experiences they want to deliver to customers.

This will be a powerful dimension for competitive advantage.

4. Five Perspectives on Martech 2024



Aggregated audience and customer journey layers



A conversation with Christopher Sell, the co-founder and CEO of GrowthLoop. The following is an edited transcript of our conversation. A [video version](#) is available online.

Let's start with a trend you have a front row seat to: what is happening with the cloud data warehouse and marketing? Is this becoming a unified data layer?

We're seeing this across a number of organizations. A unified data layer in cloud data warehouses is leading to a few other trends as well, but you're right; that's where it all starts.

Five or so years ago, organizations started centralizing more and more data to BigQuery, Snowflake, Redshift, or Databricks. It started to become the source of truth for analytics for marketing. But marketers are increasingly asking, what else can I do with that gold mine of data in marketing?

We see many of our customers questioning why they have so many different audience tools and other SaaS products that each have just a slice of the journey. Why are they measuring in slightly

different ways on opens and clicks in each of these platforms? Why do they find themselves creating different segments in each one? Why have fragmented journey orchestration or workflow orchestration in several different ones?

They're looking at this new data layer—where they have the data from all their sources—and taking it beyond just measurement and analytics. What if they had a unified audience platform sitting on top of that data that marketers could self-serve from? What if they could orchestrate journeys across channels from that same layer?

If there are two major themes we're hearing, one is that data layer and the other is gen AI. What's your perspective on how these intersect?

We think that intersection will lead to a transformation that we're calling generative marketing. You have your cloud data layer, which has all your different data about transactions and your customer profiles. You have a unified audience layer on top of it, where all of your marketers, no matter whether they're sending email or doing paid media, create audiences in the same place. And then you have a journey layer, which allows you to orchestrate across the current channels you use.

You've set up this layer cake on the widest possible dataset of your customers. Then you apply generative AI. So the question is, where do you apply generative AI in that stack? You could do it in little widgets and 10 different SaaS platforms, the end channels. Or you could start to think about generative AI at each of those layers.

If you think about it, marketers today are trying to create audiences or target segments to reach specific business goals. What if generative AI could be a brainstorming tool to help them define target segments without writing any SQL? So if they use natural language to say, "I'm trying to prevent churn in this specific type of customer", and it generates different segments for them in a collaborative way.

Then, take it to the next layer. You say, "Generate a journey for email as well as paid media for that target audience." Generative AI will start to be able to generate suggestions for those journeys

and paths. And then, what if you went even a step further and said, “Generate the different sample creatives for each of those channels and activate them to those channels.”

Today, organizations that are starting to put that layered stack in place will be able to unlock generative AI across the stack, not just in silos dedicated to each channel individually.

Where are humans in this stack-wide generative AI environment?

It’s a crucial tenant that marketers are in the loop at every single step.

The way I see it, as a marketer a dozen years ago in Google marketing, I could only try 5% of my ideas. The other 95%—because the technologies and the processes got in the way—I could never run them, never experiment with those ideas.

What I see generative marketing doing is not replacing the marketer in that seat. Instead, it’s allowing them to run 20 ideas instead of just one. But they still need to be involved at every step in that process.

I’ll give you a quick example. Let’s say I go into interface, and I’m able to start brainstorming audiences based on my goals. My job was to increase six months revenue. So I say, “I’m trying to maximize six months of revenue on key features with this type of customer.” And then the AI comes back with four different segments and says, “Hey, Chris, is this what you mean?” And I say, “Actually, no, it’s not quite right. I was looking for higher spenders. I want them to be spending a thousand dollars in the first 90 days.” It gives it another shot and comes back to me again. I review the audiences and can make changes.

When I think it’s right, I ask it to generate a journey for a particular audience across three different channels. It comes back with one on a canvas. Just like journey canvases today, I can review each step and modify it and easily add in A/B tests for additional experimentation.

Then I say, “Hey, generate some creative for this journey for me.” It drafts creative. Let’s be honest, brands are going to want to have a full review of that and be able to audit it before it ever leaves the door. But it accelerates the process. You always control the final step to decide if this journey goes out.

With generative marketing, a single marketer can go from one idea to 20 ideas, and actually execute on most of it without being beholden to a whole bunch of other teams and technologies at each step.

It’s less about automating the whole thing end-to-end, but accelerating getting these things out into the world. It’s an advantage in greater experimentation.

Huge advantage. It’s not the Westworld brain that orchestrates all our lives from the center of this building. Marketers don’t want that. Generative AI and generative marketing are the assistive tools that we’ve been waiting for.

Are there other benefits from the data layer that underpins this spanning the entire organization?

One of the biggest problems in marketing today is silos. Teams are created to operate in silos. Most marketing teams are siloed by channel. You have an email team, a paid media team, an events team, a CRM team. Most tools were built around those channels. A big problem in marketing is that those silos create tons of friction. It’s harder to get campaigns out the door. It’s almost impossible to create a seamless journey across the channels.

But now, teams will have a unified cloud data warehouse at the bottom of all this that supports all of the other tools with a trusted, comprehensive view of the customer. The next step is that all of these tools start to write back to that data layer. So, a marketer sends emails out through Braze, they want to know the email open clicks in that same data layer. This foundation starts to break down those silos across the stack.

Are there new challenges that marketers need to be ready for as they move to this model? Governance of all this unified data?

One thing I've seen over the last year or two is that the data layer is now much easier to create.

This often isn't an engineering problem anymore. Marketing analysts can create a data layer. Meaning they can use a Fivetran or Matillion to start sucking in data from different platforms. They can just use dbt and SQL to model the data and prepare it for marketing. That used to be data and engineering. Now, I see companies with a single analyst setting up a data layer.

So now marketers have access to live data and a very wide breadth of data to create audiences on. But then organizations ask, "how do we govern this?" The beauty is if you're working with a BigQuery or Snowflake, the governance tools are built right in. That same marketing analyst can tag all the different fields, put descriptions on them, and label them so that any layer sitting on top knows how to govern that data. I love that it happens in one spot.

With GrowthLoop, where we set up a unified audience layer and unified journey layer on top of that data stack, we allow our customers to set up different datasets and choose which teams can see what. We work with many large companies that may have 10 different brands, each with their own marketing teams, where they shouldn't be able to look at each other's data. With this approach, they have a layer on top of the data layer that allows different marketing teams to access only certain subsets of data.

The thing I like about that for organizations in the long run is that they're centralizing governance. You don't create another silo problem of 10 different silos of governance. You have one at the data layer, which flows downstream through other tools and channels.

Any closing advice you'd give to marketers as they're navigating 2024 ahead?

Today, marketers have the pain of working with a bunch of different tools with a bunch of copies of data that they don't necessarily trust. I think the fundamental message is that this does not have to be the state of play.

Traditionally, the technology approach of a unified data layer felt very hard. It's getting very easy, very fast. If you have one marketing analyst on your team, and you bring in a data ingestion tool like Fivetran, you can start setting this up within a week. You can actually have a data aggregation layer.

So there's a much quicker solution to data unification than has been possible before in martech. Keep that in mind when you're getting your next all-in-one pitch and looking at a three-year roadmap. It is not the only way forward.



Customer data infrastructure in an AI era



A conversation with Michael Katz, the co-founder and CEO of mParticle. The following is an edited transcript of our conversation. A [video version](#) is available online.

Good day, Michael. As the co-founder and CEO of mParticle, you've been at the forefront of one of the world's leading CDPs. Can you delve deeper into the significant shifts in marketing and martech, particularly concerning customer data's evolving landscape?

We're witnessing a transformational phase in martech, with the ascendancy of the cloud data warehouse being particularly notable. This shift is empowering knowledge workers with unparalleled access to first-party data.

Over the past two decades, I've noted an industry hesitation in establishing a robust first-party data foundation. The past reliance on third-party cookies or external data sources was often seen as a workaround. However, today's focus is firmly on understanding and leveraging the vast swaths of data generated directly by customers.

But it's worth noting that merely having access doesn't equate to successful execution. The challenge is to turn this vast data into actionable insights.

With such a plethora of data now centralized in these cloud warehouses, how do you see marketers navigating this space to harness the data effectively?

History reveals patterns, and the current abundance of data isn't unprecedented. There was a time when the digital advertising landscape underwent a similar evolution. Data was suddenly available in spades, and the primary challenge was determining the tangible impact of this data.

Now, with even larger volumes of data at our disposal, mere segmentation or traditional analytical tools fall short. This is where advanced machine learning enters the fray, helping us uncover intricate patterns that are beyond the scope of conventional analytical tools.

As we talk about data and its sources, it's evident that marketers now liaise with a broader team – from data engineers to IT. How do you envision this collaborative dynamic?

Throughout my tenure in this industry, I've consistently advocated for the idea that data is a collaborative endeavor. The days when developers instrumented tags are fading, making way for a more integrated approach involving data engineers and scientists. Both the data providers, those who craft the queries and code, and the data consumers, the front-office professionals leveraging this data, need to join forces.

At mParticle, our guiding philosophy is to be architecture agnostic. Our mission centers on facilitating the intelligent movement of data, ensuring it reaches where it's most impactful.

The term "zero-copy architectures" is gaining traction in martech circles. Could you shed light on this and share your perspective?

Zero-copy architecture, at its core, revolves around the idea of minimizing data replication and movement within a system. The term "zero-copy" signifies that there's no need to create additional copies of data when performing operations or transferring it between systems or applications.

Now, when we talk about its application in cloud data warehouses, there are a few things to consider:

Efficiency and Performance: Zero-copy architectures can lead to significant performance boosts, especially in environments where large volumes of data are processed. By minimizing the need for redundant data copying, systems can operate more rapidly and efficiently.

Cost Implications: In the cloud, while storage costs have generally decreased, computational costs can add up. Every time we move or process data, there's a cost associated. Zero-copy can lead to cost savings by reducing unnecessary data transfers and operations.

Data Integrity: Having a single source of truth without multiple copies can reduce discrepancies and inconsistencies, leading to better data quality and integrity.

However, it's not always a silver bullet. There are situations where zero-copy might not be the best fit. For instance:

Application Limitations: Not all downstream applications or systems can handle or benefit from zero-copy methodologies. Some might require specific data formats or structures that necessitate data copying.

Operational Complexity: Implementing zero-copy can sometimes introduce complexities, especially in legacy systems or when integrating with certain third-party tools.

In my perspective, while zero-copy is a promising approach and offers tangible benefits in many scenarios, it's essential to evaluate its applicability based on specific use cases and system requirements. Not everything that's labeled "zero-copy" will automatically lead to performance boosts or cost savings. It's crucial to understand its nuances and implement it where it truly adds value.

Pivoting to AI, it's evident that its application has permeated every facet of martech. Could you elucidate the forms of AI that are making waves in the marketing arena?

I categorize AI into five primary types:

1. Text-based AI like GPT, which is revolutionizing content creation.
2. Visual-based AI such as Dali, transforming graphic design.
3. Interactive AI, which powers intelligent chatbots offering near-human interactions.
4. Analytical AI, designed for extracting predictions from extensive datasets.
5. Functional AI, which progresses from analytical AI, instigating actions based on those predictions.

Each form has its unique value proposition, offering solutions tailored to specific challenges within the marketing domain.

Given this expansive AI landscape, where do you see most marketers currently positioned? How mature are their AI implementations?

It's a mixed bag. The AI realm has been marked by alternating periods of hype and skepticism. In the early days, rudimentary algorithms were often misbranded as AI, leading to skepticism about their genuine impact.

Now, however, technological advancements support bona fide AI capabilities. While numerous vendors champion their AI tools, true AI must encompass a broad spectrum of machine learning techniques. It's not merely about creating propensity models; genuine AI should offer a suite of analytical tools, from regression analyses to lookalike models.

Real-time processing is often touted as the next frontier. Why is it gaining such significance?

Speed is the essence of today's digital age. The contemporary consumer's attention span is fragmented across multiple screens and notifications. For marketers, the window of opportunity is fleeting. Real-time processing is the answer to ensuring timely, relevant interactions, amplifying the customer experience. In a world where third-party data sources are dwindling, and customer acquisition costs are escalating, owning and enhancing the customer experience is paramount.

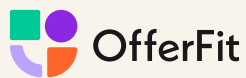
From an infrastructure standpoint, what's necessary to support real-time capabilities?

Supporting real-time operations demands a holistic approach. From the moment of data collection to its final activation, every step needs to be instantaneous. This includes real-time data collection, swift identity resolution, and immediate data dissemination to downstream tools.

However, there can be bottlenecks, especially if downstream applications don't support real-time ingestion. The key lies in optimizing every step of the data journey.

To round off, in the ongoing debate between an integrated software suite and multiple specialized tools, where do you stand?

It's about striking the right balance. While infinite customization might appeal to some, the majority seek efficient, integrated solutions. The ideal is a streamlined stack that's comprehensive yet not overly complex. The future lies in harnessing the best of both worlds.



Overcoming the three bottlenecks of personalization



A conversation with George Khachatryan, the co-founder and CEO of OfferFit. The following is an edited transcript of our conversation. A [video version](#) is available online.

Let's start with the big white whale of marketing, the dream of one to one personalization. What stands between us and bringing that dream to life in this age of generative AI?

The dream is the idea of the perfect message, at the perfect time, through the right channel, for each individual based on everything you know about them. It's almost a cliché, given how often we hear it. Pretty much every single marketer agrees that's the dream, that's the promised land.

I see three bottlenecks:

The first is data integration. You need to get your systems talking to each other. And that's challenging because all these systems interpret data and produce data in different formats.

It's a bit of a tower of Babel situation in the martech stack.

The second bottleneck is content creation. You need a large library of potential messages and writing content is very labor intensive. It's the writing, it's the images, compiling it all, running it by various departments that need to approve it.

And the third bottleneck is experimentation. Even if you have all of your systems beautifully talking to each other, all the data is wonderful, and you have a magnificent library of content, how do you know what is actually the best thing to deliver to each person?

Today the way marketers do that is a lot of manual experimentation in the form of A/B tests. It's incredibly labor intensive because you need to design the experiments, run them, analyze the results. Every time something changes, if you have a new idea or new asset, or if customer behaviors shift, you need to redo it.

It doesn't scale. You can maybe test a few things for your most important campaigns, but truly testing at the segment or micro-segment level — not even talking about one-to-one — is impossible in that frame.

Let's dig deeper on the data bottleneck. This seems like an area where there's a lot of discussion around the cloud data warehouse?

The last five years have seen huge progress here. Ten years ago, few marketers at enterprises even had a unified view of the customer. They'd have data living in 17 different systems of record, all with different customer IDs. Getting that 360 was impossible. Now, it's clearly a priority at enterprises to unify data and do identity resolution with first-party data that's being brought into warehouses or customer data platforms.

A lot of marketers talk about how generative AI is going to help write content, which is true. That's the obvious application with ChatGPT. The less obvious thing is it's actually very good at interpreting data. Even more so, when you have a defined process, such as transforming data from one format into another, gen AI can write the code for that. Companies will use these large language models to make data transformation much easier and totally automated.

Today, you need data engineers writing a bunch of custom SQL queries. Soon, gen AI will create all the configuration needed to take your data, transform it, and get systems talking to each other. You'll have the ability to interpret the data, ask clarifying questions, and the AI will answer you. It's like giving an automated translator to

each citizen of this Tower of Babel in the martech stack, which will make it much easier for everyone to communicate with everyone else.

Content generation is probably the most obvious case for generative AI. But how do we make sure that content is actually usable in a one-to-one personalization scenario?

There are some obvious and some less obvious things. The obvious things are things like making sure that there's a way to include your brand guidelines, so the content that's produced is on-brand. There needs to be a feedback loop, where the language models make suggestions, the marketer gives feedback, and then that's incorporated in subsequent iterations.

Then there's less obvious stuff. For example, this may sound a bit more technical, but I think it's important: parametrization. If you create this content library, and you're going to feed it into an automated experimentation tool, it's less efficient if the tool sees this as a big soup, a big grab bag of content. It all looks the same. From a statistical point of view, running those tests and finding out what works is much harder because you're testing 5,000 discrete things.

What you want for good experimentation is there to be some structure. So it's more like a lasagna than a soup. For example, you have these pieces of content, you actually need to know, oh, these are the same ad, but they have a different background color, these are the same email messages, but they have a different subject line.

My guess is that in the tech stack of the future, there will be some tools where you use generative AI to create completely new assets, like a brand new email or a brand new ad. But then to create different variants of that asset and test them, that's going to be a different system. Because that's how you make sure your experiments are structured correctly and efficiently.

This leads into the third bottleneck around experimentation. How do you see generative AI changing the art and science of marketing experiments?

There's a branch of machine learning called reinforcement learning. Folks might have heard of it a few years ago when DeepMind, which is now owned by Google, built this model that taught itself to play chess. No one told it how to play chess. It played against itself 4 million times. And became better than the world's best players and any other software system ever built before. It was using reinforcement learning.

In reinforcement learning, you're not just looking at historical data and learning from that. You're actually learning through trial-and-error, just like experimentation. You may have also heard of it in reference to generative AI, where these language models are fine-tuned using reinforcement learning through human feedback. It's a core part of the modern AI toolkit.

Marketers today do a ton of manual experiments. If they're not doing A/B testing, it's because they just don't have the resources, and it's a big gap and pain for them. If they are doing experimentation and A/B testing, it's also a big pain because they want to go faster in being empirical about their marketing and trying more different things.

With generative AI, there's a huge opportunity for marketers to ditch manual A/B testing, set up reinforcement learning to automatically experiment, and improve all of their campaigns. Until recently it wasn't even practical because the data infrastructure wasn't there and machine learning wasn't yet mature enough. But in the last few years, those two things have come together.

Is this growing wave of reinforcement learning experimentation a path for a better relationship between marketing and finance?

Obviously interest rates have gone up quite a bit. From the CFO's perspective this means that future cash flows are now worth less than they were worth before. When you have low interest rates, like almost zero, a dollar today and a dollar in five years are worth the same. If interest rates are 5%, a dollar today, even if you invest it at

zero risk, will grow 5% a year, and it's going to be worth a lot more in five years. That's causing finance departments to tighten their policies on what projects and investments qualify to be financially valuable for the company. It raises the bar.

One immediate way that's hit marketing is acquisition marketing. Before in a zero interest rate environment, it was, "Spend all you can on acquisition." Even if those customers only return that money over the long term, generating customer lifetime value over many years, that's fine. It's zero interest rates. So grow at all costs.

Now that's no longer the case. CFOs have been tightening acquisition budgets and raising the bar on what qualifies. However, companies are still trying to grow quickly. There's still a huge drive for these companies to hit their growth targets.

So what we've seen is a shift of focus from acquisition marketing to an increased focus on customer marketing, AKA lifecycle marketing. What can you do through owned channels like SMS, email, push notification in-app, etc. with your existing customer base? How can you maximize the value you are providing them so that they stay with you longer and they're happy customers who tell their friends and drive organic growth?

We're seeing this is much higher on the agenda of CMOs, whereas in the zero interest rate environment, they were much more focused on acquisition, just new people in the door. Now the focus is: how can we optimize how we interact with our existing customers?



An important time for responsible marketing



A conversation with Jonathan Moran, head of martech solutions marketing for SAS, and Michael Obermaier, SAS' senior manager of the martech advisory practice in Germany. The following is an edited transcript of our conversation. A [video version](#) is available online.

What is responsible marketing?

Responsible marketing is about building and maintaining trust between a brand and its consumers. 70% of almost 80,000 consumers surveyed by Forrester in their consumer benchmark survey wished companies were more transparent about their business practices.

Only 59% from the consumer trust imperative survey released by Forrester state they believe that the tech companies that they purchased from make every effort to do the right thing morally. That's 41% who don't.

Yet only 17% of CIOs and about 25% of CTOs report being strongly concerned about the ethical or responsible use of data and technology.

There's a gap between what consumers want and what brands are delivering. SAS has created this responsible marketing framework to help fill that gap in their marketing practices.

Tell us more about this framework.

We look at it from three different angles or pillars.

First: the responsible use of customer and marketing data. Maintaining the balance between personalization and privacy. Accounting for legal and ethical compliance. Protecting vulnerable audiences.

Second: the responsible use of technology. Promoting accuracy and safety and honesty. You're empowering instead of replacing marketers. Driving sustainability.

Third: the wise use of organizational resources. Using optimization, attribution, and enterprise decisioning to make smart moves with your marketing dollars and budgets. Be more profit focused, aligning marketing as a revenue generator more than a cost center.

Who's driving this push for responsible marketing.

All the C levels. It's not just the CMO. Everybody has to share in driving this.

Consumers are demanding this. There's a lot of expectation around privacy. Expectations for brands to act in a sustainable way. As well as legal frameworks such GDPR, the Data Act, the EU AI Act. How will organizations use generative AI going forward? What kind of data are they going to use and how will personal information be used?

Then there are drivers from a company perspective: competitive differentiation, managing risk, managing cost, protecting against data breaches and cybercrime.

How are we doing on data, technology, and resources, the three elements of your framework?

Responsible marketing — or broadly responsible customer engagement — is like diet and exercise. It's a constant journey.

You can always strive to get better. I don't know a single brand that would say, hey, we're 100% great from a data, technology, and resources perspective.

We urge brands to evaluate how well they're doing within each pillar. Run an assessment to look at different KPIs for data, technology, and resources. They're going to vary by industry, geography, size of your organization. But the end idea is to be able to take scores, KPI scores from each one of those three pillars, add them together and get that resultant score to see the progress being made.

Where do you see differences between responsible marketing in the EU as compared to the US?

As a rule of thumb, legal pressure is much higher for companies located in the EU. But also for those who have customers in the region and want to sell products or services that are affected by these regulations.

Data protection regulations such as GDPR have strong guardrails on what you're allowed to do with the data, how you use personal identifiable information. Now, on top of this, there is a new regulation, the Data Act, which addresses the way consumers are able to use their own data that's been collected by companies.

And then there's the AI Act, which looks at how artificial intelligence is using information about consumers, with differences in how impactful different AI models can be and what guardrails need to be considered.

These kinds of regulations embrace this topic of aggregation. The aggregation of technology, different platforms, which necessarily also lead to responsibility in how you treat those different data platforms, how you exchange data between them, and how you safeguard the data that's flowing through these systems.

There's a lot of pressure for companies to be compliant in time for these acts. US companies might be a bit more cautious about these regulations. But if they want to do business in those countries, they're obliged to comply with local regulations.

How do I know I'm working in a responsible way? Is there a way to measure it?

How do you measure trust between consumers and brands? We want to have a score, an end number that says I am at 86 out of 100, and therefore I have a little more to go until I'm perfect. But it doesn't necessarily work that way because there are so many factors that impact trust. Inventory, the customer experience, price, service, post sale, all of these things, are inputs into trust, which then drives loyalty and lifetime value.

There is no one score that indicates perfection. But you can look at how compliant I am from a data privacy perspective? What are my personalization, maturity scores from an engagement and net promoter score perspective? What are my loyalty scores? You can perform audits, you can look at utilization metrics, you can look at bias detection and mitigation scores. From a resource perspective, attribution, accuracy, optimization, cost savings, return on marketing and investment, your P&L, and other kinds of financial metrics.

One of the other aspects of responsible marketing that you laid out here is ESG, environmental, social governance, sustainability. How do you see that fitting into responsible marketing?

So earlier this year, the EU adopted a new directive that requires companies to have annual sustainability reports. Right now, this is only required from organizations of a certain size, based on the revenue. But at some point, it will trickle down to others. How sustainable and how environmentally conscious are they operating their own marketing organization? How green is their marketing? There are even supply chain laws that require you to look into your suppliers and how green they are too.

Digital technology accounts for almost 4% of the total global greenhouse gas emissions. For instance, how much CO2 does an average email without an attachment produce? From the point where it's sent out from some brand and then shows up in a consumer's inbox?

An email without an attachment generates an average 10 grams of CO2. An email with an attachment of 30 grams. Even if the email

never sees the light of day, because it lands in some spam detection server, it still produces 2 grams.

When you look at all the emails, even those you delete that live somewhere on somebody else's computer, they produce a lot of CO2. So organizations have to think more carefully about how they're going to use these technologies. Is spray and pray still the way to go? Or can hyper personalization be used to achieve the same or better outcomes while generating less CO2?

With the third-party cookie going away pretty soon, we may see much less targeted online marketing, which in turn also means a rise in CO2 emissions there as well. So again, this is very philosophical at this point, but hyper-targeting can be a lever for being a more environmentally conscious marketing organization.

What if we fail to perform responsible marketing? What happens then?

Legal and ethical, first big bucket. Fines. Obviously, in some cases we've seen corporate executives do prison time for being irresponsible in different areas of the business.

Financial. Loss of revenue. That would be the second big bucket.

Environment. Lack of environmental certifications, excess waste.

Economic. Not just environmental waste, but other types of waste due to inefficient spend.

And then brand. You can really damage your brand.

In the EU, the consequences can be large fines. In the US, there might be more social consequences from cancel culture. You don't want your brand to get canceled.

How do you think about the intersection between responsible marketing and AI?

AI is squarely centered within responsible marketing. We're looking at it through our responsible AI and data ethics practice, how to use

data in an ethical and legally compliant manner.

A key opportunity: how can we make sure people are trained and educated to be able to ask the right questions of AI and evaluate the answers? The knowledge that's available at our fingertips is vast and massive. But there's still the need to understand what you're looking at. It's a social responsibility and corporate responsibility, not just a technology one.

Vice versa, we really need to look at the training of the models. What kind of data are we providing? There need to be guardrails in place so corporate data remains private and secure.

One thing you'd say to folks heading into 2024, to make sure that they're bridging responsible marketing globally across their business?

When it comes to data and technology, I would say the general rule of thumb is look for the highest bar and aim for that.

Customers will value if you are open and transparent in the way you treat their data and they will pay you with their trust and their loyalty in the long run.

If you're looking at this from a global perspective and you're a global company and looking at how you bridge different use cases and the different pillars within the responsible marketing framework across countries, know that this is only going to become more and more important over time. Start looking at things from a responsible marketing lens now and take it as an opportunity.



Operationalizing first-party data in the customer experience



A conversation with Alex Dean, the co-founder and CEO of Snowplow. The following is an edited transcript of our conversation. A [video version](#) is available online.

Let's dive right in on a major trend that marketers are facing in 2024: the ascendance of first party data. Where are marketers at in this journey?

This is a hot topic at the moment. I've been calling third-party data the "trans fatty acid" of the industry. There is an increasing understanding for marketers that third-party data is problematic, emphasized by both the browser privacy and regulation trends infringing on its use.

The industry is moving towards first-party data, collected and owned by brands and by publishers. While some marketers are still waking up to this shift, the journey has already begun.

Do you think people even appreciate what first party data is or can be or, oh, first party data, you mean like names and email addresses?

You've almost got two separate worlds of data: the modern data stack, often being built on top of data warehouses. And then you've got the marketer ecosystem, cookie-land, with a lot of browser-based technologies. And they're just not speaking the same language.

As marketers move into the first-party data world, we all have a job to explain what that looks like. What is first-party data? When you look across the spectrum of all the possible touch points that an organization might have with its customers, or its audience, it's enormous. It is beyond what traditionally would be considered classic marketing touch points. Frankly, any touch point we have with the customer has the potential to give us some insight from a first-party data perspective, including: contact center data, connected TV, CRM systems, etc. All of this data is pivotal to creating rich customer behavioral profiles.

Web and mobile interactions are a big part of that too. How adept are most brands in leveraging interaction data from those touch points?

There's been good progress, but there's much terrain yet to be covered. Over the years, numerous brands have embedded event tracking mechanisms across their properties, but the data has been held very captive in specific systems. The big trend over the last few years has been the rise of the data warehouse, or lakehouse, and the idea that a brand can now capture all their data in their own ecosystem.

With trends like AI and generative AI, now the question becomes how good is that data? How rich is that data? How schematized? And so that's something that we're working on a lot at the moment, helping brands to realize how valuable this data is for feature engineering, predictive modeling, consumer propensities, and things like that.

Beyond analytics, are we shifting further into being able to operationalize this data and feed it back into the customer experience?

Yes. The first big trend was reverse ETL, which kicked this off about two years ago. It made people realize that the data in the warehouse was not an endpoint. It was not a cul-de-sac. It was an incredible central location to not only build insights, but to also build rich behavioral profiles, which could then be activated in downstream marketing channels and campaigns.

Next, we now have the trend of tools becoming warehouse native, which means more and more SaaS applications for marketers are backing themselves directly on Snowflake or Databricks. That idea really is quite powerful, because you move from all these tools having silos of data to them all leveraging a nicely unified central source of truth. These new tools are now simply adding a front-end for marketers on top of the data directly, eliminating data silos and unifying the customer view.

How do we have to think about this from a governance and compliance perspective as more of this data becomes accessible?

That's a hot topic. There's growing consensus across martech and data vendors that this is a better architecture for compliance and governance.

I did a composable CDP webinar a few months ago and every person on the panel, from very different types of companies, was unanimous that this idea of browser-side tag management, sending customer behavioral signal out to loads of different endpoints from the front-end was a wrong turn in the industry. The place where compliance tools are now being built is directly in the modern data stack, on top of your data lakehouse or data warehouse.

I think this is the right architecture. Marketers are quite quickly waking up to how much data leakage was going on, a lot of signal, proprietary information, and private behavior being sent out to third parties. We need to control that much more on the backend.

What other challenges are marketers grappling with as cloud data warehouses become prevalent? Do they have the right talent and skills on their teams?

I think capability gap is a good way of putting it. Marketers are having to get much closer to technologists, ie: the IT and data teams. They're having to cross from cookie-land into SQL-land. And we need translators, marketing IT and martech hybrids to help bridge the gap.

When an industry is trying to compose together best-of-breed tools to create differentiated outcomes, it just takes more kinds of expertise to bring the pieces together. The payoff is much bigger. But marketers are on a real journey to upskill and work with a broader set of technical collaborators. It's a lot of new stuff for them.

Does this blur the lines between marketing operations and IT? Is that a good thing?

Digital natives and tech startups have led the way. Many have very integrated marketing, growth, and data teams joined at the hip working on this together and building like homegrown composable CDPs. It's still relatively new in the enterprise, but there's motivation to make this shift.

I think one of the reasons we're in this kind of unbundling phase and technology teams are getting more involved is because some of the promises of those bundled marketing cloud offerings just haven't really lived up to their promise. A lot were built off a lot of acquisitions that weren't that well-integrated. And so now enterprises are starting to pull this into the warehouse. They can get all their data in there, do an identity stitch, and then drive the activation right on top of that common layer.

Is this what's driving the discussion around composability in martech?

The problem with a lot of over-packaged approaches is you're always only one market trend or technology trend away from needing something new.

Generative AI is a great example. Can you wait for this vendor or that vendor to put in the gen AI features you need for your business, which might be quite bespoke? Compared with a peer organization that's been building up a rich data warehouse and central source of truth with loads of customer data and first-party data in it for a few years, and they can just go train an LLM on that. Meanwhile, you're waiting for vendors to put the features you're itching for into their roadmap.

So this gets us to the concept of composability, like composable CDPs, and the degree to which people want to pull things apart.

What exactly is composability from a marketer's perspective?

To me, a composable CDP or any kind of composable software for marketers is something that's built out of best-of-breed components, some of which you buy, some of which might be open source, some of which you might build internally because they're differentiated. It's not just one vendor product, a "composable X." It means best of breed. It means integrating together different pieces.

One of the reasons that's so important in enterprise is because you can't afford to change all the different components of your stack at the same time. You have different timeframes on different vendor relationships, different projects in different parts of the life cycle. You need to be able to keep evolving without changing everything at once. Replace everything projects often fail.

So what do you need from your vendors to be composable? Interoperability. You have to have some level of interoperability between components. They have to play nice with each other. They have to play nice with your downstream platforms.

Any parting advice you want to pass along to marketers as they think about the year ahead?

Stay agile. Do experiments. Especially keep experimenting with Gen AI. There's so much to learn. But do it in phases. Crawl, walk, run. Don't try to do the huge replatform. Don't try to do the huge kind of company changing AI project. Do it through incremental steps and use that time to get better acquainted with the IT and the data teams. Because you're going to be working very closely together.

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