2025 builder report

Guide

Retool

2025 Builder Report

How data teams go from managing information to shipping software

What data leaders need to know:

- **AI mandates are forcing the data connectivity question.**
  Two-thirds of builders now work under AI directives, but scattered data across silos makes meaningful AI adoption nearly impossible. Unified data access isn't optional anymore if companies want to see real productivity gains from their AI mandates. **The data access bottleneck is real (and expensive).** 52% of business users were building workarounds in spreadsheets before getting proper AppGen tools, while 42% were submitting requests that competed for your team's limited bandwidth. A quarter of problems simply went unsolved.

- **The build-vs-buy calculus has changed.**
  When your data team can generate production apps in days instead of months, the ROI equation shifts dramatically. 51% of builders now solve problems in days or weeks.

What data practitioners will discover:

- **Recognition follows capability.**
  46% of builders are now recognized by leadership as people who can "make things happen," and 24% are involved in strategic technology discussions. Building on data infrastructure you already manage is becoming a career differentiator.

- **Your backend skills are more valuable than ever.**
  Among the builders we surveyed, 91% report significant changes to how they work since gaining building capabilities and 48% of non-engineers can now build without waiting for engineering. Those SQL and schema skills now translate directly into full business applications.

- **Self-service doesn't mean losing control.**
  46% of builders now create tools that integrate data sources in ways that weren't possible before, while maintaining governance. When generation happens inside a governed platform, every app inherits your existing RBAC, SSO, and data policies.

The gap between having clean, accessible data and solutions that put it to work has remained stubbornly wide. Until now.

The data team job description just got rewritten. Analytics engineers are deploying production apps. Data analysts are building self-service tools that finally kill those endless SQL requests. Teams that used to manage infrastructure are now shipping software—no frontend developers required.

Our survey of 1,128 Retool builders—including hundreds of data professionals—reveals that when data teams get the right tools, they become organizational force multipliers. Almost half (48%) of non-engineers are now building production solutions independently. More importantly, 65% of builders working with data report they're now better able to meet or exceed leadership's productivity expectations.

In this report, we uncover how these new teams of builders are responding to AI productivity mandates, what happens when domain experts can build independently on unified data, and what it all means for the economics of your data investments.

48%

of non-engineers can now build directly without waiting for engineering.

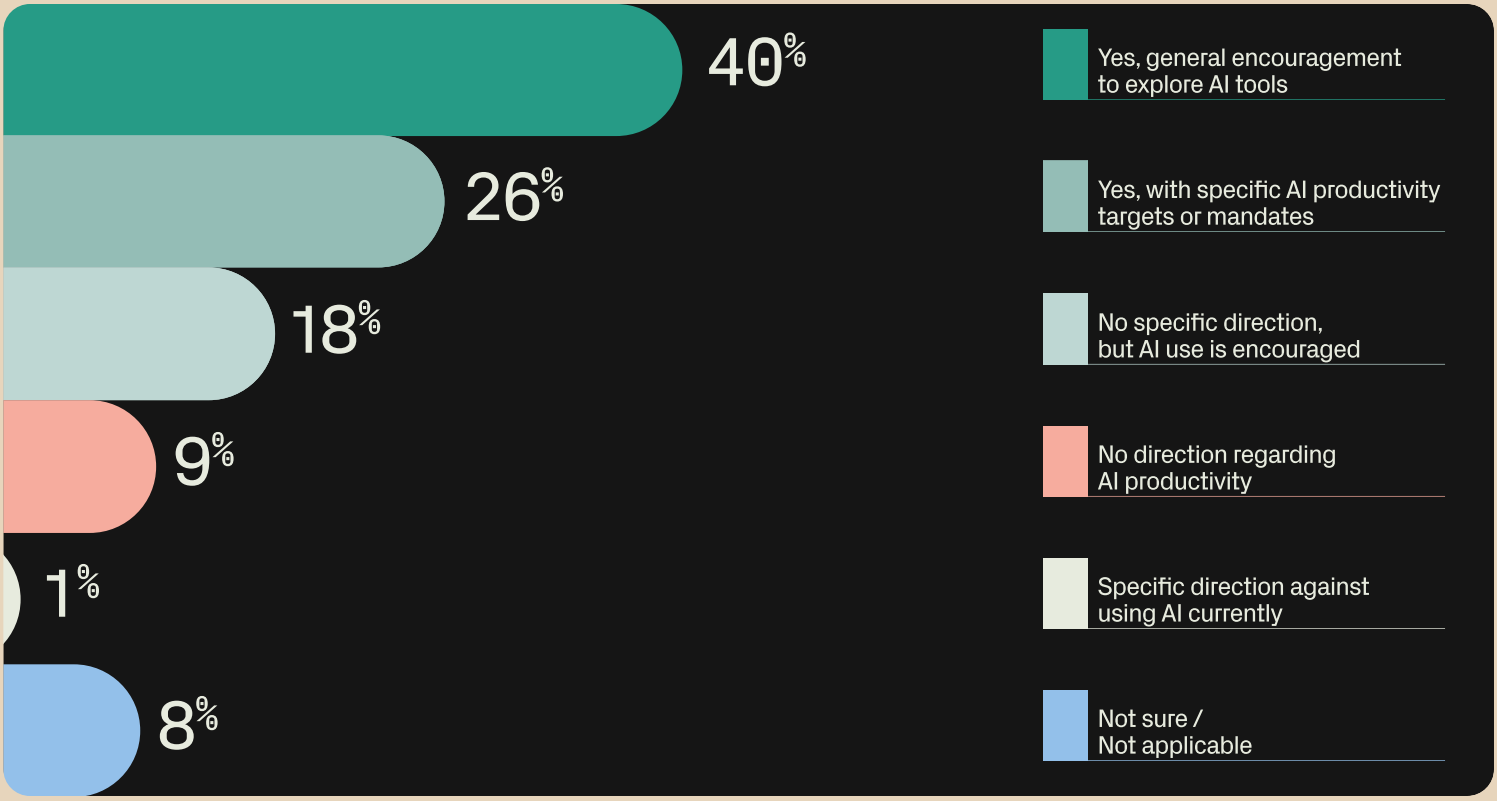
AI mandates raise the stakes for more productive work

Just a few months ago, AI mandates from leadership felt like edge cases. Companies like Duolingo and Shopify went public about their expectations for "AI-first" work—and received public backlash for it.

That backlash wasn't enough to stop other companies from following suit (albeit quietly). Our study found two-thirds (66%) of builders are now working under explicit AI directives—from general encouragement to explore AI tools (40%) to specific productivity targets (26%).

Is leadership mandating AI usage?

AI DIRECTIVES VS. PERCENT OF TOTAL RESPONDENTS



PERCENT OF TOTAL RESPONDENTS, N=1,128 INTERNAL SOFTWARE BUILDERS USING RETOOL

Only 9% of respondents say their organizations provide no AI direction whatsoever, while a mere 1% report explicit direction against AI use.

The backlash against these companies wasn't enough to turn the tide against AI-first work policies. In August, Duolingo announced that it beat its quarterly revenue estimates. The promise of AI's ability to scale human work is winning out, and business leaders are noticing. But how will those policies turn into real returns?

Individual productivity gains from AI mandates are proving harder to scale into sustainable organizational productivity gains. A 2025 report from MIT found 95% of businesses aren't seeing significant value from AI, and just 5% of custom enterprise AI tools reach production.

To overcome this AI productivity paradox, builders will need the right solutions, skills, and internal support.

A new builder profile emerges as AppGen expands what's possible for non-technical business users

The traditional lines between "technical" and "business" roles are getting blurry. Building effective production software used to be limited to who in the business could code: mostly engineers and developers, plus some domain experts who taught themselves coding basics.

Now, AI has given anyone the ability to write code, and AppGen has given them the ability to use that code to deploy apps safely.

Our survey of Retool builders found most ***aren't*** software engineers. They're operations managers, data experts, and other domain experts who are able to ship production software independently:

- 35% are software engineers or developers
- 13% are operations leaders
- 11% are product managers
- 8% are data analysts/scientists
- 5% are IT or systems administrators
- 5% are marketing/sales operations
- 6% are business analysts or in finance/accounting

An additional 18% responded "other," bringing the total of non-engineers to 65%.

The data also shows high-impact building is not limited to the senior team: 15% of respondents are entry-level, 28% are mid-level, 27% are senior level and 31% are leadership or management-level.

Organizations are discovering that their most valuable employees may not be the most senior or the ones with the deepest technical knowledge. About two-thirds of these builders report they're now better able to meet or exceed leadership expectations.

The survey shows a new generation of builders is rising, whose independent problem-solving makes them more productive team members.

65%

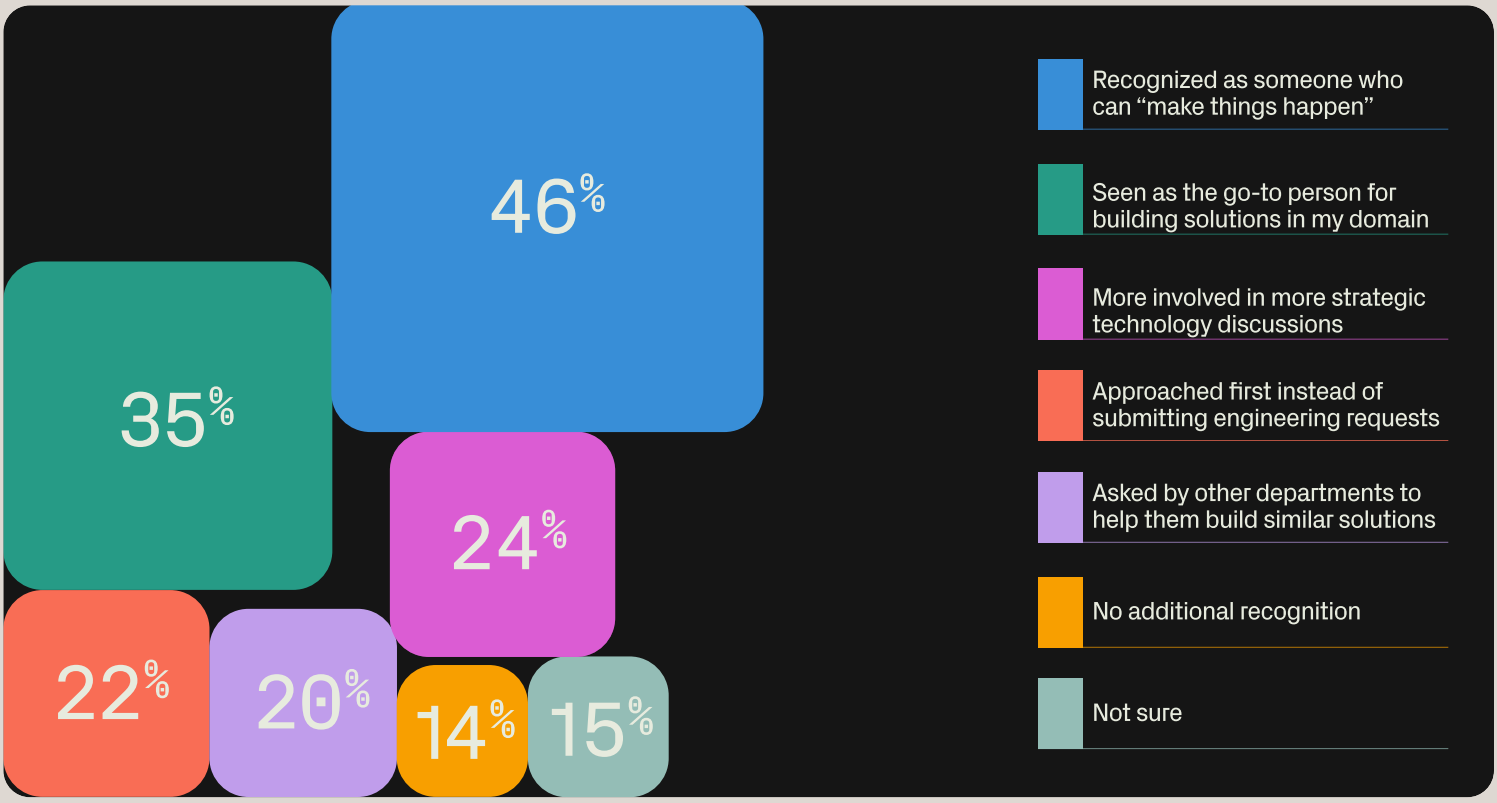
of builders now meet or exceed leadership productivity expectations.

As AI augments existing skills and expertise, leadership takes notice

Breaking down leadership's perception of builders, almost half are recognized as people who can "make things happen," and 35% have become the go-to person for building solutions in their domain. Nearly a quarter (24%) are now involved in strategic technology discussions—a clear indicator of role expansion beyond traditional boundaries.

How are builders perceived by stakeholders?

STAKEHOLDER PERCEPTIONS VS. PERCENT OF TOTAL RESPONDENTS



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Clearly, leaders notice when builders step up to the plate, even though real productivity ROI from AI tools has proven harder to measure than we thought. What, then, does this mean for process owners who don't embrace AI-powered problem solving? Time will tell.

The next generation of builders won't need permission to solve their most pressing problems

An organization's ability to build a custom tool used to come down to who could code, who owned the tools and platforms, and how much time they had available to solve a problem outside of their scope.

Now, problems that once required engineering approval, project prioritization, and months-long development cycles can be solved in a few days. Business users become the solution-builders, and software engineers evolve into platform enablers and architectural supervisors.

Almost all builders we surveyed (91%) report significant changes to how they work since gaining building capabilities, signaling a fundamental shift in organizational problem-solving dynamics.

With the right solution and platform, builders can make sure the changes yield a positive impact, not more trouble down the line.

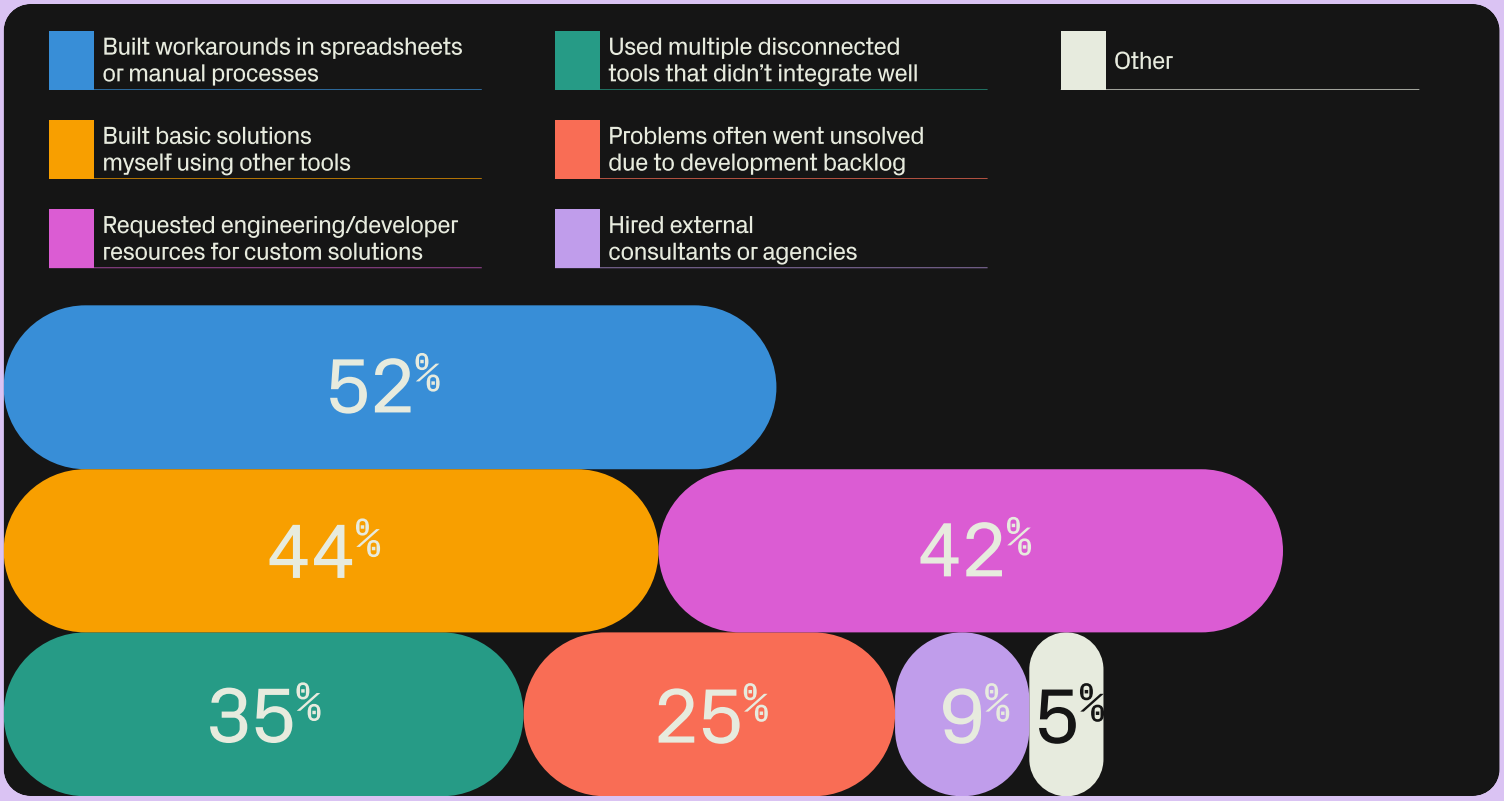
Builders face manual workarounds and limited internal resources when solving business challenges. Before enterprise AppGen, teams were trapped in a cycle of workarounds and dependency. Problem-solving tactics included workarounds in spreadsheets or manual processes (52%), and 44% were creating basic solutions with other tools. Almost half (42%) still had to request engineering resources.

91%

of builders report significant changes to how they work.

Pre-Retool problem solving

STAKEHOLDER PERCEPTIONS VS. PERCENT OF TOTAL RESPONDENTS



PERCENT OF TOTAL RESPONDENTS, N=1,128 INTERNAL SOFTWARE BUILDERS USING RETOOL

A quarter of problems simply went unsolved due to development backlogs—a huge indictment of traditional resource allocation. Meanwhile, multiple disconnected tools (35%) created integration nightmares, and 9% resorted to expensive external consultants to bridge the gap.

Aaron Schnider, an analytics engineer at Lithic, is one builder who didn't want to deal with manual processes anymore.

"I wasn't going to write `INSERT` and `UPDATE` statements manually. I would rather spend time cranking out an application over the weekend," he says.

The custom billing app he created is proof positive that the gap between business expertise and technical execution is shrinking. Enterprise AppGen tools are already unblocking non-technical teams that are accustomed to lengthy request processes and competing priorities.

Teams moving fast need guardrails to avoid speeding in the wrong direction

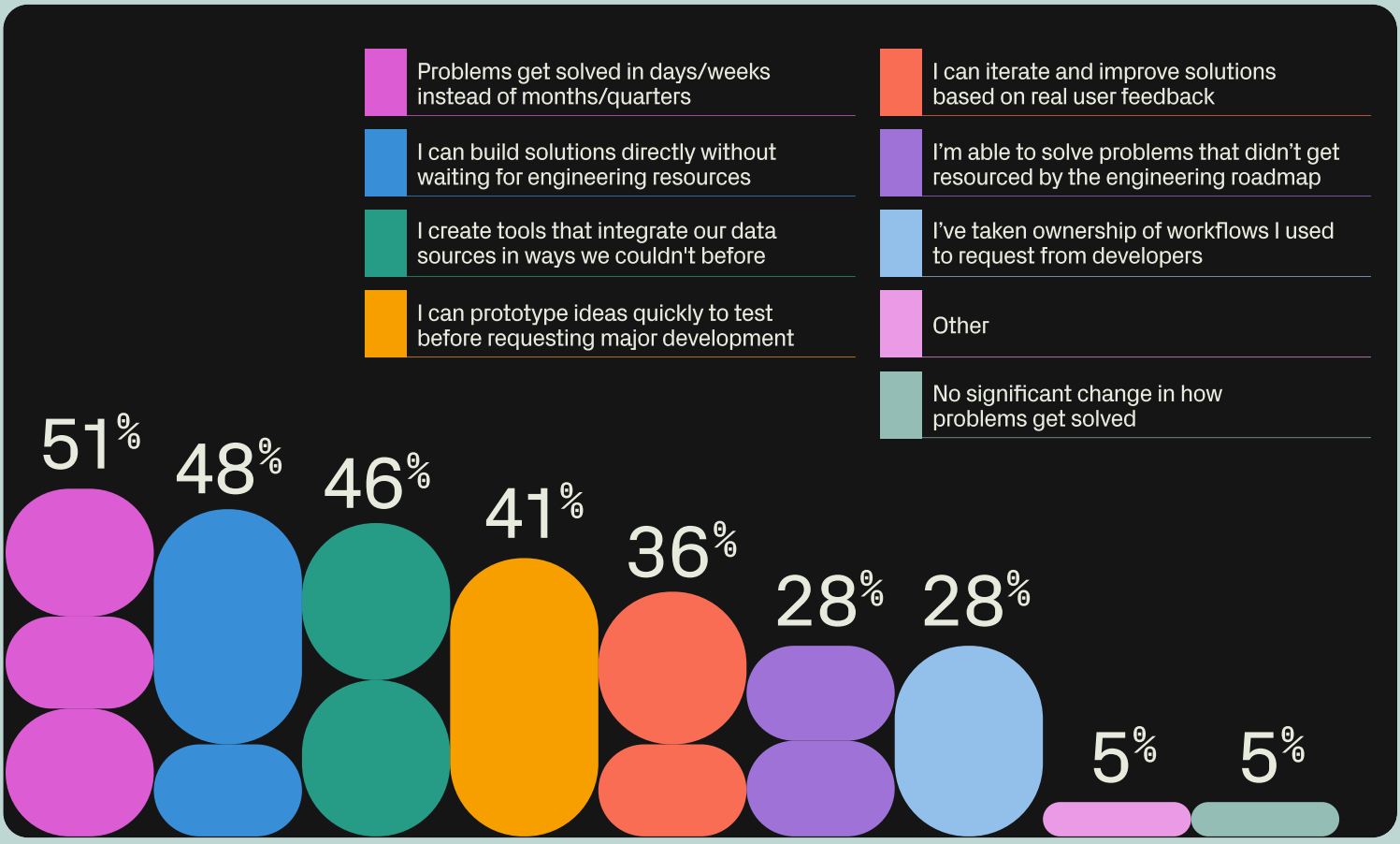
In every superhero origin story, there's a moment when the hero learns the boundaries and consequences of their powers before ultimately being able to use them for good. New builders are like these new superheroes. Uniquely equipped to make things better, but at risk of destruction without the right guardrails.

For these builders, the enterprise AppGen capability transformation has been dramatic:

- 51% now solve problems in days or weeks instead of months or quarters
- 48% build solutions directly without waiting for engineering resources
- 46% create tools that integrate data sources in ways that weren't possible before.

How are builders perceived by stakeholders?

PROBLEM-SOLVING CHANGES VS. PERCENT OF TOTAL RESPONDENTS



PERCENT OF TOTAL RESPONDENTS, N=1,128 INTERNAL SOFTWARE BUILDERS USING RETOOL

As more non-technical teammates build software, they'll need guardrails to direct their forward momentum.

Consider a technically-minded marketing agency manager building a commission dashboard. They prompt an AI tool, which generates a working prototype in minutes—but the prompt didn't account for granularity of who can access what parts of the dashboard. Now, every partner can see each other's earnings. There's no authentication, no row-level permissions, no audit trail.

This builder has a choice: spend weeks learning to implement security and governance from scratch, or abandon a solution that could save dozens of hours per week. With these types of constraints, it's easy to see why so many AI projects are abandoned.

But when generation happens within a governed platform—where authentication, permissions, and query policies actually constrain what's generated—the outcome changes. Our marketer adds `where employee_id = current_user.employee_id` and the platform enforces it server-side. IT configures the integration once; builders use it safely without handling credentials. The onus falls on the platform to carry the complex work of security and compliance, not the builder. Now, they're able to ship secure, production-ready solutions just as quickly as they could prototype insecure ones elsewhere.

The capability shift has the power to change organizational DNA. When business users can build their own solutions in the right environment, the entire company moves faster.

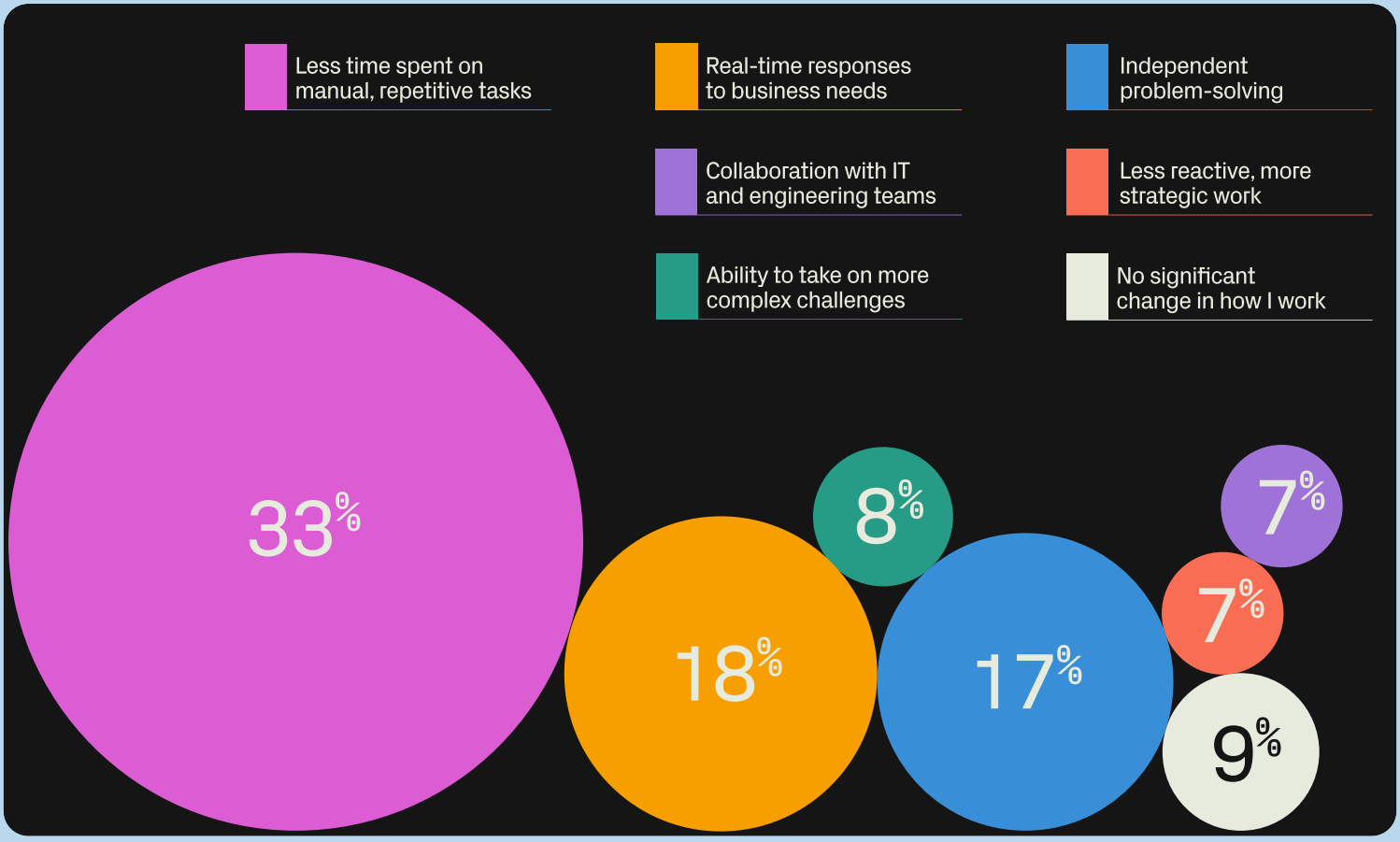
The new economics of building of custom software

B2B SaaS has long promised to free up employees to do more meaningful work by automating or solving a problem. With enterprise AppGen, that vision is finally becoming a reality—custom software built by the people closest to the problem. Business users get solutions that make their work easier, and builders become organizational force multipliers.

When asked to choose the top change to how they worked, one-third of respondents said they spend less time on manual tasks—the most common response.

Top changes to how builders work

SIGNIFICANT CHANGE VS. PERCENT OF TOTAL RESPONDENTS



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Builders also reported improvements to real-time responses to business needs (18%) and more opportunities for independent problem solving (17%).

Until now, businesses have scaled capacity through hiring or bringing on SaaS tools. Now, a company's output can scale horizontally across business functions rather than hiring for specific roles or buying expensive software.

This economic impact isn't limited to hiring and team structure. The build versus buy calculus that has governed enterprise software decisions for decades now includes a third option: build with business users.

The majority of builders (80%) can now go from identifying a problem to solving it without asking for resources or support.

ClickUp's GTM team built six custom AI tools on Retool that automated hundreds of hours of manual work without adding multiple vendors or involving engineers. The result: hundreds of thousands of dollars saved in headcount costs and over $200k in avoided vendor expenses. Their inbound SDR agent alone replaced what would have been an expensive point solution, while their Order Form Reviewer eliminated $200k per year in automation software costs.

These solutions evolve with the business instead of constraining it. Purchased software locks organizations into vendor roadmaps and feature limitations. Custom solutions built by business users in their enterprise AppGen environments adapt as quickly as business needs change. And the people building these solutions are becoming more valuable without becoming more expensive.

The real test of this new economic model comes when organizations start measuring impact against their AI mandates.

80%

of builders can now go from problem identification to solution implementation without additional support.

Builders under AI productivity mandates are proving the custom software model works

The internally built custom software approach is driving results for teams under AI mandates. Under these mandates, where careers and budgets depend on demonstrable productivity outcomes, 74% of builders are exceeding leadership's expectations.

This represents a crucial validation point for the custom software model. Ready-made solutions force businesses to adapt their metrics to what the software can measure, while custom-built solutions like ClickUp's can track exactly what leadership wants to improve.

74%

of Retool builders under AI mandates report exceeding leadership's productivity expectations.

The data team advantage: turn infrastructure into impact

The organizations winning with AI are the ones that solved the data foundation problem instead of spinning up prototype after prototype. When data teams can build production applications as quickly as they can write queries, everything changes.

Your expertise in data modeling, your understanding of business context, your knowledge of which datasets actually matter—these are the skills that determine whether AI initiatives succeed or stall in prototype mode.

Methodology

This report is based on a comprehensive survey conducted in July 2025 across 1,128 Retool builders.

The survey employed a mixed-methods approach, combining quantitative multiple-choice questions with qualitative open-ended responses to capture both measurable trends and nuanced transformation stories.

See how Retool transforms data teams into builders

Retool connects to your entire data ecosystem—from PostgreSQL and MongoDB to Snowflake and Databricks—and lets you generate production-ready applications with natural language. Built on your data, in your cloud, with enterprise security and governance from day one.

Data teams using Retool report solving problems in days instead of quarters, eliminating dashboard backlogs entirely, and finally seeing ROI from years of data infrastructure investment.

Ready to move beyond the backlog?

→ **Explore the platform**: Schedule a personalized demo to see how Retool works with your data stack

→ **Start building today**: Try Retool for free and connect to your first data source in minutes

→ **See it in action**: Watch data teams build with case studies from companies solving real problems on real data