White paper

To Build or To Buy?

How businesses are navigating
the build or buy equation.

Solve

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Introduction

Each time an organization identifies the need for a new application, technology leaders face a difficult choice: Do we build a solution in-house, or do we buy an existing solution to fit this need?

Over the past decade, this decision has been heavily driven by the accessibility and ease of each approach at any given time. As a result, the build/buy equation has fluctuated back and forth, with organizational preferences leaning toward the method with the most accessible tools at the moment.

We now sit at a point where both building applications and buying applications are realistically accessible to most organizations, which leads to the question:

What does the future of compute hold for the build/buy equation?

In September 2020, we asked technology leaders in ten countries to share their perspectives on the future of compute for their organizations. For this report, we surveyed CIOs, CTOs, COOs, IT Directors and other senior IT decision makers at organizations across a range of industries, including: technology, manufacturing, retail, media, financial services and the public sector.

Our survey posed questions related to each organization's current ratio of built applications to bought applications, how tech leaders expect to shift that ratio in the future, what drives the choice to build or buy and what tools they rely on for each approach.

Here, we'll present our key findings and subsequent predictions on the future of compute over the next three to five years.

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The equation of build/buy is changing, but not in the way we expected

We expected to see a shift in this equation — knowing that building applications in-house is becoming more feasible, while out-of-the-box SaaS solutions are also becoming more customizable to meet unique business needs. We predicted that the build/buy equation would shift dramatically over the next three years, with tech leaders favoring one approach over the other.

At first, we were surprised to see that the results of our research indicated very little, if any, shift in the ratio of building applications vs. buying applications. In fact, tech leaders seemed to indicate that they planned to maintain the same ratio of build to buy in the immediate future.

Upon closer inspection, we found that while tech leaders don't expect the ratio to change much, a shift is occurring. Our research revealed that tech decision makers don't plan to move strictly away from build and toward buy (or vice versa), but rather to shift in strategically choosing when to build and when to buy. The balance of the equation isn't changing, but the underlying strategy is.

Based on the results, businesses will prioritize building high-impact applications that enable a business to differentiate itself in the landscape, while investing in customizable SaaS for all other applications.

As we analyzed further, the more interesting questions then became: Which applications do tech leaders intend to build, which do they intend to buy, and why?

We came away with three findings:

1. The build/buy equation is shifting to a strategic balance of both, with the choice heavily based on an application's ability to differentiate a brand or impact revenue.
2. When buying applications, tech leaders are increasing their adoption of SaaS solutions.
3. When building applications, tech leaders are amplifying their investment in low-code/no-code solutions.

Let's take a deeper look at these three insights from our research.

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The balance of the build/buy equation isn't shifting — the underlying strategy is.

The survey results did not support our prediction that organizations would decrease their focus on building applications, in favor of buying. In fact, the participants' answers revealed that organizations don't plan to significantly change their current distribution of building vs. buying.

Approach for new software and applications

How is your current approach for new software and applications distributed across the below options?

total respondents **1,870**

■ Currently
■ 3 year's time

Built internally	Bought off the shelf (with some customisation)	Bought as a service (SaaS)
37% / 38%	32% / 31%	31% / 31%
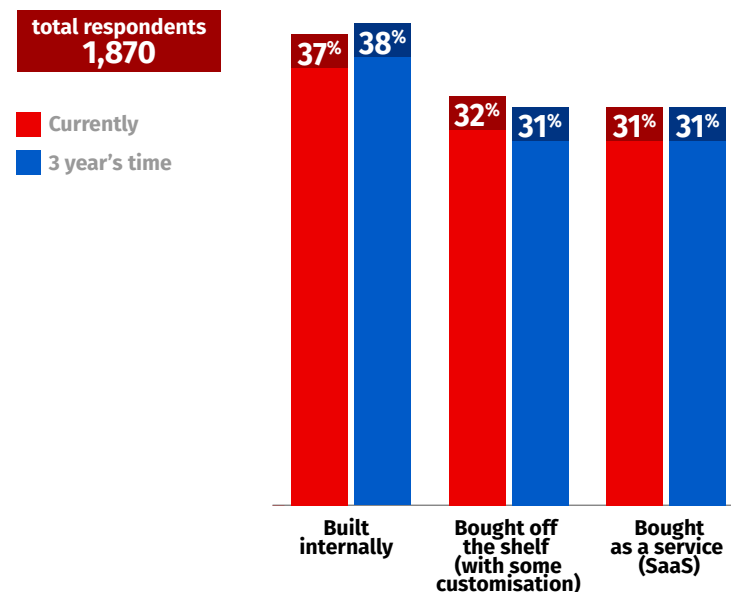
Figure 1 - Approach for new software and applications

From the highest level, it looks like the build/buy equation isn't changing, but taking a deeper look, we learned that the equation *is* shifting — in the underlying strategy around whether to build or to buy.

Rather than choosing to prioritize one approach over the other across the board, organizations plan to invest more strategically in each approach, as appropriate for each business case. Tech leaders see the value in both build and buy, and they interpret that value differently depending on an application's impact to the business. [Figure 2, Figure 3]

Application development - 2 years ago and currently

What is your approach to specific application development? Please state the approach you use for each application currently and what it was 2 years' ago?

| total respondents 1,870 | Build internally | Buy (and customise) | Buy as a service (SaaS) |

	Enterprise software		Ecommerce systems		Business process/back office automation		Digital content, content management system		Our own products an services	
	currently	2 years ago	currently	2 years ago	currently	2 years ago	currently	2 years ago	currently	2 years ago
Buy as a service (SaaS)	19%	22%	24%	26%	31%	26%	29%	25%	22%	21%
Buy (and customise)	33%	38%	48%	43%	37%	39%	41%	40%	35%	36%
Build internally	48%	41%	27%	32%	32%	35%	30%	35%	44%	43%

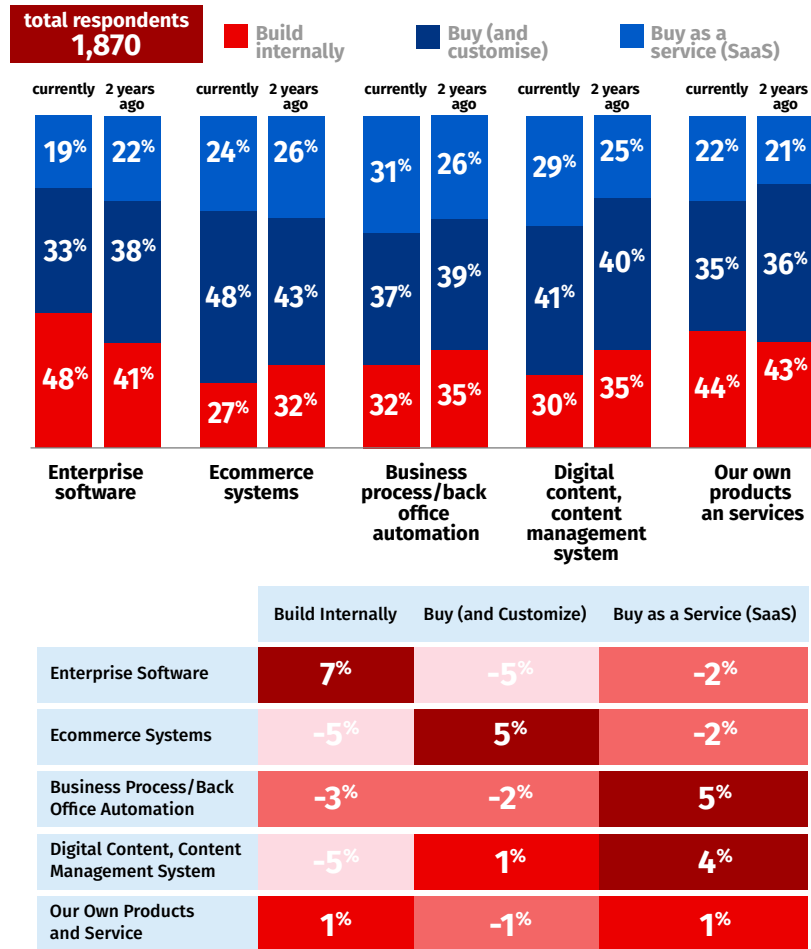|	Build Internally	Buy (and Customize)	Buy as a Service (SaaS)
Enterprise Software	7%	-5%	-2%
Ecommerce Systems	-5%	5%	-2%
Business Process/Back Office Automation	-3%	-2%	5%
Digital Content, Content Management System	-5%	1%	4%
Our Own Products and Service	1%	-1%	1%

Figure 2 and 3 - Application development - 2 years ago and currently

Compared to two years ago, survey participants are shifting away from build and toward buy for ecommerce systems, business process automation, back-office solutions and content management systems. 70% of participants indicated that they utilize SaaS offerings in the back office to gain efficiency. [Figure 4]

Simultaneously, survey participants are shifting away from buy and toward build for enterprise software and for their organization's products and services. 72% of participants selected "strongly agree" or "tend to agree" that they prioritize building customized applications for customer-facing purposes, and 67% selected "strongly agree" or "tend to agree" that digital transformation and the need for differentiation is driving the need to build applications in-house. [Figure 4]

Views on statements

Keeping your business in mind, to what extent do you agree or disagree with the following statements?

| total respondents 1,870 |

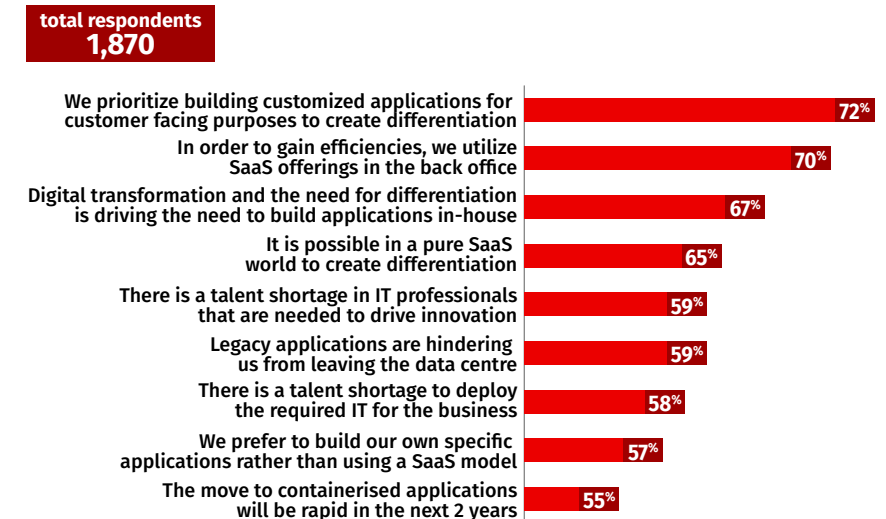|	
We prioritize building customized applications for customer facing purposes to create differentiation	72%
In order to gain efficiencies, we utilize SaaS offerings in the back office	70%
Digital transformation and the need for differentiation is driving the need to build applications in-house	67%
It is possible in a pure SaaS world to create differentiation	65%
There is a talent shortage in IT professionals that are needed to drive innovation	59%
Legacy applications are hindering us from leaving the data centre	59%
There is a talent shortage to deploy the required IT for the business	58%
We prefer to build our own specific applications rather than using a SaaS model	57%
The move to containerised applications will be rapid in the next 2 years	55%

Figure 4 - Keeping your business in mind, to what extend do you agree or disagree with the following statements?

We believe this is a result of tech leaders aiming to "work smarter" with their in-house development skill sets; reserving the internal technical resources for building applications that will have a high impact on customer experience and differentiate the brand from competitors. For all other applications, they prefer to buy solutions, for increased efficiency and ease of use.

With two of the greatest business challenges cited as hiring skilled employees (38%) and training and upskilling existing employees (42%).

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Tech leaders don't want to spend valuable developer resources building and maintaining applications that won't significantly set the brand apart.

The future of build vs. buy brings a focus on applying skilled in-house developers where they'll have the most impact and buying reputable solutions to fill the gaps.

Greatest challenges

Which of the below present the greatest challenges to your organisation currently?

total respondents 1,870

Figure 5 - Which of the below present the greatest challenges to your organization currently?

Diving deeper, we asked about which types of tools tech leaders are focused on to drive their buying strategy and their building strategy.

In cases where organizations choose to buy, we will see increased adoption of SaaS.

The decision to buy an application is primarily driven by its ease of use and implementation (62%), followed by the opportunity to gain a competitive edge (59%) and familiarity with the existing application (58%). [Figure 6]

Notably, participants also indicated that fast project timelines and compatibility with other applications are driving factors in the choice to buy solutions.

Reasons for buying software applications

When you choose to buy software applications, why do you do that?

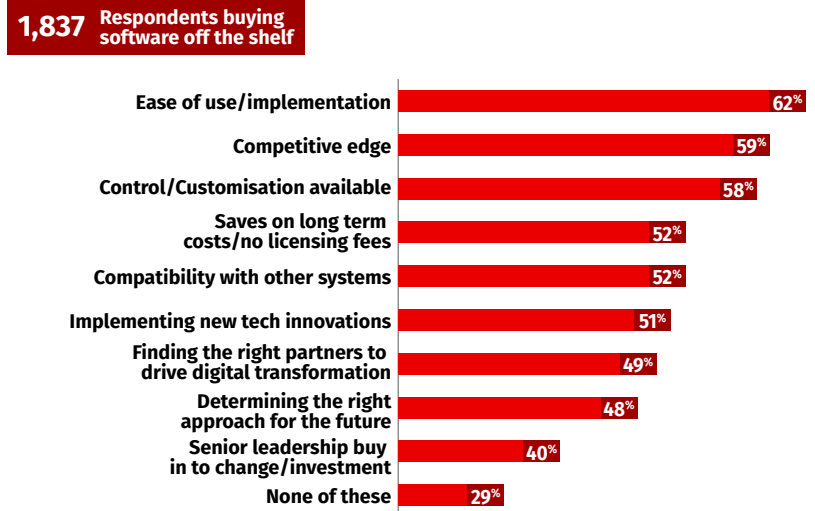**1,837 Respondents buying software off the shelf**

Figure 6 - When you choose to buy software applications, why do you do that?

These factors are steering tech leaders toward buy, for a higher ROI in cases where an application won't significantly elevate the business in the eyes of their customers. Building in-house is generally more costly and time-consuming, and may offer a lower return for applications that don't drive revenue directly.

The reasons for buying are also influenced by the level of tech savvy among end users (such as back-office staff, HR personnel and marketing teams).

It's easier to bring back-office staff up to speed on a familiar, user-friendly SaaS product than a bespoke system, where only a handful of internal developers can provide user training and troubleshooting. SaaS applications offer dedicated service teams and even user-led communities to support user adoption, answer questions and troubleshoot common issues.

For a business problem that's fairly standard — such as scheduling, accounting or operations management — why reinvent the wheel by building a completely custom application in-house? There is likely a SaaS provider who has already invested time and resources toward refining a solution for this particular business problem; making buying the more efficient option in terms of cost and deployment speed.

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Within the options for buying a solution, SaaS products are rising in favor as they continue to become more robust in capabilities, highly customizable and easier to implement. Our research indicates a rise in SaaS as the preferred option when buying applications to enhance crucial but non-differentiating areas of business.

One of the attractive factors of SaaS products, that we expect will continue to grow, is the capacity for customization. This is likely one of the major factors that causes tech leaders to opt for SaaS rather than another buy solution. 65% of participants agree that it is possible in a pure SaaS world to create differentiation. [Figure 4]

Importance of SaaS products

Which of the below SaaS products do you use and how important are they? Please rank them in order of importance, where ranked 1st is the most important.

1,783 Respondents using some SaaS

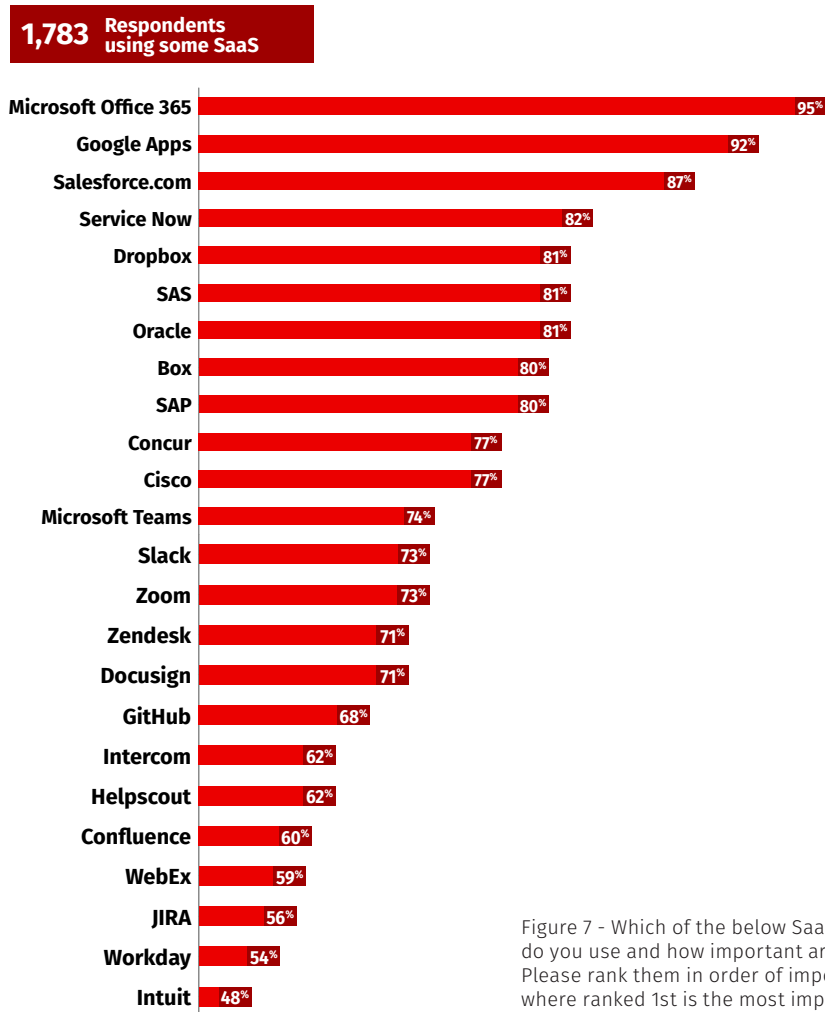| Product	%
Microsoft Office 365	95%
Google Apps	92%
Salesforce.com	87%
Service Now	82%
Dropbox	81%
SAS	81%
Oracle	81%
Box	80%
SAP	80%
Concur	77%
Cisco	77%
Microsoft Teams	74%
Slack	73%
Zoom	73%
Zendesk	71%
Docusign	71%
GitHub	68%
Intercom	62%
Helpscout	62%
Confluence	60%
WebEx	59%
JIRA	56%
Workday	54%
Intuit	48%

Figure 7 - Which of the below SaaS products do you use and how important are they? Please rank them in order of importance, where ranked 1st is the most important.

Customization of SaaS prodcuts

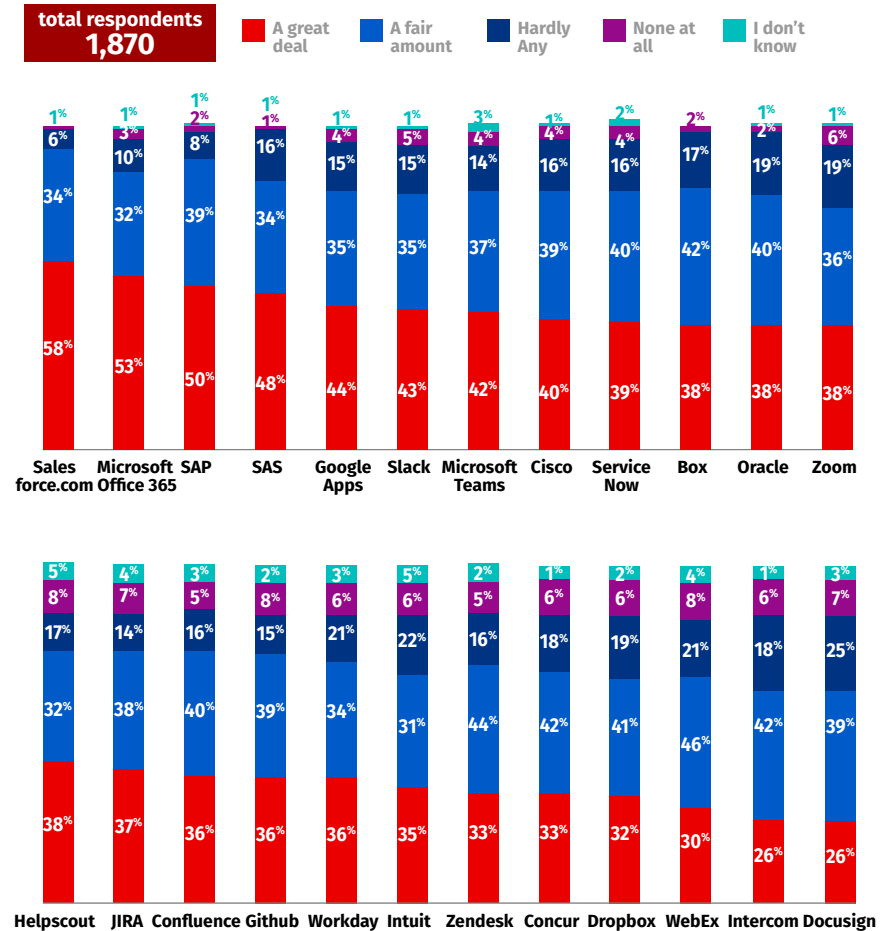How much customization do you think is available in your current SaaS products?

Figure 8-9 - How much customization do you think is available in your current SaaS products?

The trend is moving toward choosing to buy whenever possible, to see a higher ROI, increase efficiency and ease of use, and maximize resources by freeing up in-house talent to build applications that will bring higher impact.

In cases where organizations choose to build, we will see increased adoption of low-code/no-code solutions.

The decision to build applications in-house is primarily driven by ease of implementation (60%), the opportunity to gain a competitive edge (56%), and the ability for a high level of control and customization (56%). [Figure 10]

Reasons for building software applications internally

When you choose to build software applications internally, why do you do that?

1,809 Respondents building some software applications internally

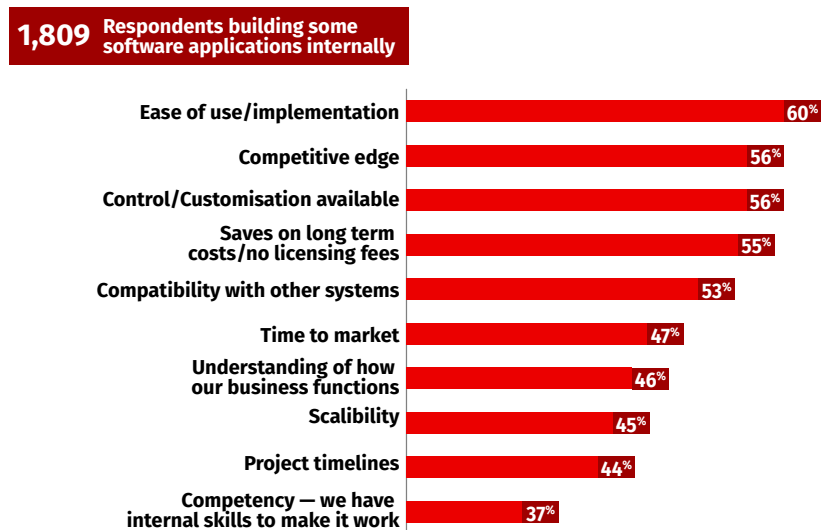|	
Ease of use/implementation	60%
Competitive edge	56%
Control/Customisation available	56%
Saves on long term costs/no licensing fees	55%
Compatibility with other systems	53%
Time to market	47%
Understanding of how our business functions	46%
Scalibility	45%
Project timelines	44%
Competency — we have internal skills to make it work	37%

Figure 10 - When you choose to build software applications internally, why do you do that? Please select the five most important reasons, ranking the most important 1st.

Differentiation is the name of the game, as the ability to set your brand apart and deliver a superior experience is a major driver of revenue. In areas where an application will heavily impact the customer experience or give the brand an advantage over competitors, it's beneficial to build in-house and retain full control over the application. The increased time and expense of building internally is worthwhile when there's a high business impact.

For proprietary applications, building in-house also brings a level of security. By far, the biggest force driving tech leaders to invest in building applications internally is that of concerns over security (57%). After this, employee growth (44%) and speed of development (43%) are the next biggest factors that steer tech leaders to invest in building.

Driving investment

Thinking specifically of investment in infrastructure, which of the below factors are driving investment focus on building applications internally within your organisation?

1,809 Respondents building some software applications internally

Increased security concerns	57%
Employee growth	44%
Speed of development	43%
Greater flexibility	40%
Need to update outdated infrastructure	39%
Changes to regulations	32%
Recent security breech	27%
The software is our core competency/product	24%
Lack of an external partner with the right skills	23%
My or my customers needs are not met by off the shelf software	23%
Wanting to be in control of the roadmap and features	23%
Previous bad experience	22%
Avoiding Licensing Fees	21%
Our industry/regulations require it	12%

Figure 11 - Thinking specifically of investment in infrastructure, which of the below factors are driving investment focus on building applications internally within your organization?

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When asked which tools tech leaders plan to use for building applications, 72% of participants said their organization uses low-code/no-code platforms [Figure 12], and as many as 86% said they are satisfied or extremely satisfied with low-code/no-code developments. [Figure 13]

Utilizing low code/no code
Does your organisation utilize low code/no code software development platforms?
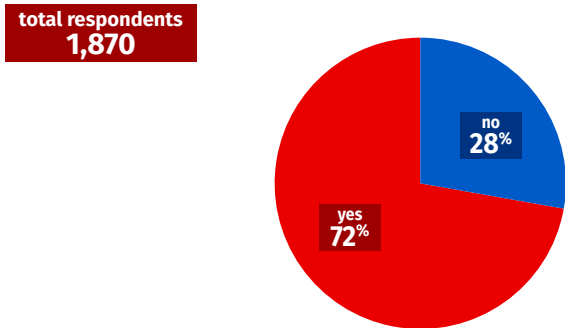
total respondents 1,870

no
28%

yes
72%

Figure 12 - Does your organization utilize low-code/no-code software development platforms?

Satisfaction with low code/no code
Overall, how satisfied are you with low code/no code developments to date?

1,349 Respondents utilizing low code/no code software
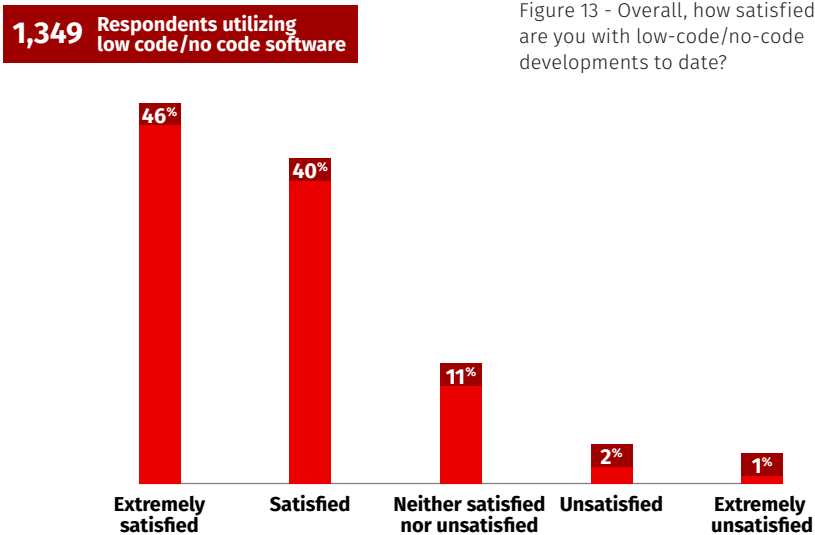
Figure 13 - Overall, how satisfied are you with low-code/no-code developments to date?

46%
40%
11%
2%
1%

Extremely satisfied | Satisfied | Neither satisfied nor unsatisfied | Unsatisfied | Extremely unsatisfied

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Over half of participating organizations (58%) use low-code/no-code platforms for enterprise software, such as supply chain management, CRM, HR systems and ERP. Low-code/no-code is also heavily used for building content management systems (43%), back office automation (41%), and an organization's products and services (41%).

Areas of business utilizing low code/no code
Please list the areas within your business where low code/no code is utilised.

1,349 Respondents utilizing low code/no code software

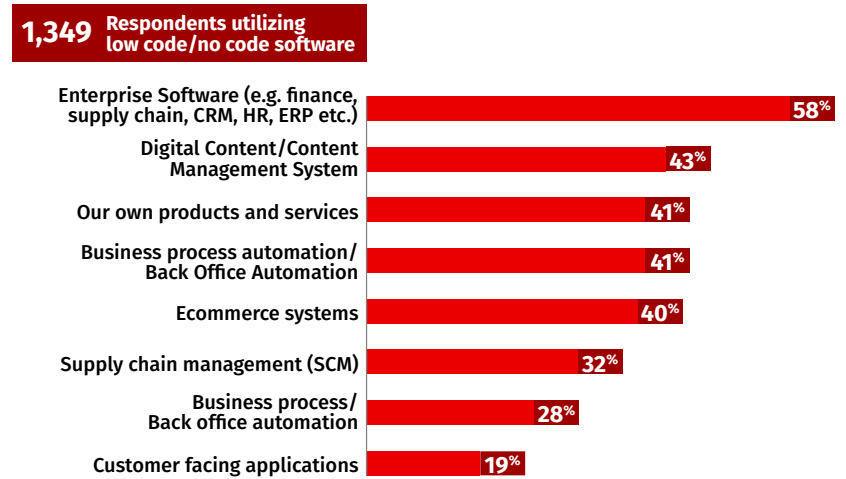|	
Enterprise Software (e.g. finance, supply chain, CRM, HR, ERP etc.)	58%
Digital Content/Content Management System	43%
Our own products and services	41%
Business process automation/ Back Office Automation	41%
Ecommerce systems	40%
Supply chain management (SCM)	32%
Business process/ Back office automation	28%
Customer facing applications	19%

Figure 14 - Please list the areas within your business where low-code/no-code is utilized.

The high preference for low-code/no-code solutions appears to continue the trend of "working smarter" even within the build approach, by reserving skilled technical developers for highest impact work and supplementing with existing technology. Low-code/no-code tools democratize application development, allowing organizations to leverage user-friendly build tools to bridge the gap in developer skill sets — and free up their high-value developer resources to support applications with a high strategic focus for the business.

It will also increase customization across other areas of business applications by leveraging lower-skilled development to tailor in-house applications to unique needs.

Benefits of low code/no code

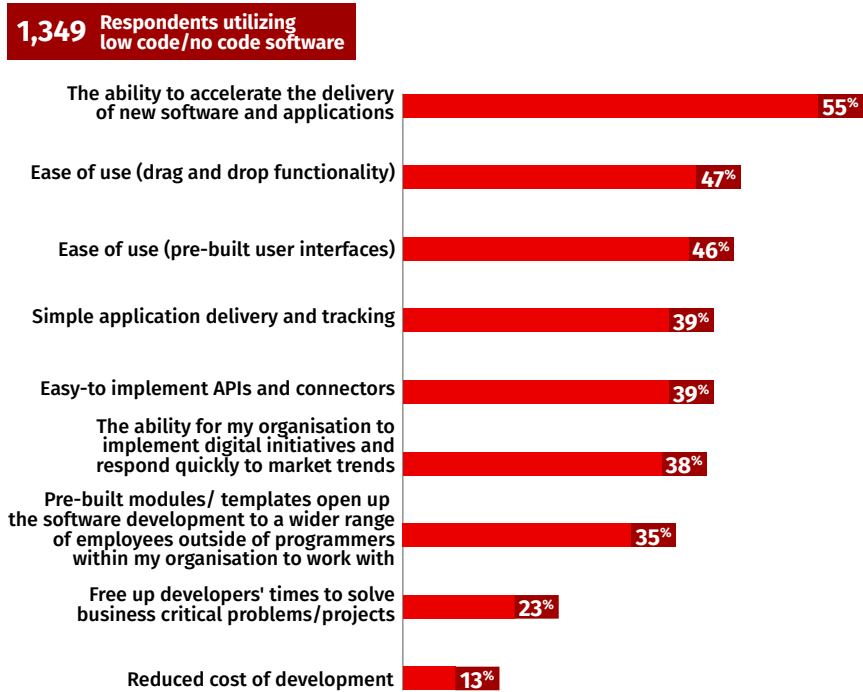What are the benefits for your organisations utilization of low code/no code?

1,349 Respondents utilizing low code/no code software

The ability to accelerate the delivery of new software and applications	55%
Ease of use (drag and drop functionality)	47%
Ease of use (pre-built user interfaces)	46%
Simple application delivery and tracking	39%
Easy-to implement APIs and connectors	39%
The ability for my organisation to implement digital initiatives and respond quickly to market trends	38%
Pre-built modules/ templates open up the software development to a wider range of employees outside of programmers within my organisation to work with	35%
Free up developers' times to solve business critical problems/projects	23%
Reduced cost of development	13%

Figure 15 - What are the benefits for your organizations utilization of low-code/no-code?

Tech leaders have no plans for slowing down their use of low-code/no-code tools in the near future. 64% can envision their business using a low-code/no-code approach extensively in the future, and 63% concur that low-code/no-code will be the key trend for the next three years. [Figure 16]

Views on low code/no code

To what extent do you agree or disagree with the following statements regarding low/no code?

total respondents 1,870

I can see the business using the low/no code approach extensively in the future	64%
Low/no code is the key trend for the next 3 years	63%
Low/no code democratizes application development	63%
Low/no code removes the ability for real differentiation in application development	62%
The low/no code approach offers great time based advantages over traditional developments	61%
Low/no code is a trend or buzzword and we have no plans to utilize it	54%

Figure 16 - To what extend do you agree or disagree with the following statements regarding low-code/no-code?

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Our predictions for the build/buy equation moving forward

We set out to discover whether tech leaders would focus more on building or buying in the next three to five years. It turns out our original questions were off-base.

We learned that at this stage of compute, the far more valuable questions to examine are:

1. **What will drive tech leaders to build?**
2. **What will drive them to buy?**
3. **How do they plan to fuel those approaches?**

The future of compute lies in making strategic choices around whether to build or buy, for each individual application; optimizing in-house resources to build applications that offer high value or differentiation; and increasing efficiency and ROI by buying reputable SaaS products for all other purposes.

How will the build/buy equation continue to change?

Based on our findings, we expect to see an increasing focus on SaaS applications, particularly those with high levels of customizability. Organizations won't want to spend highly technical human resources on implementing and customizing their SaaS solutions, so we can expect a growing demand for more user-friendly UX that allows less technical staff to get on board more quickly, as well as more partner support from SaaS providers.

We also predict that we'll see increasing demand for more accessible and user-friendly low-code/no-code solutions in the cases where organizations do choose to build in-house. Even when building, tech leaders want to use their human resources as wisely as possible; they will look to low-code/no-code tools that allow junior developers to do more, while reserving the highest/most technical or senior developers for the work where they can make the most impact.

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What tech leaders can take away to guide their decisions around build/buy

Technology decision makers should start to assess each new application from the standpoint of two criteria:

- What impact will this have on our customer experience?
- Will this significantly differentiate us in the market?

Tech leaders should continue to invest in filling internal teams with the technical skills to build custom applications in-house; these skills will continue to be important. At the same time, leaders should be more strategic in applying their technical human resources to the applications that will bring the highest impact; using the two questions above to assess carefully before deciding to build a new application in-house.

For all other applications — those that don't meet the two criteria above — tech leaders should look to SaaS products and other solutions that don't require highly technical internal resources to implement, train users and manage updates.

Lessons learned:

- Don't reinvent the wheel if the application won't significantly differentiate your business in the competitive landscape. Back-office or operations products won't set you apart from competitors; it's not important to make these unique or proprietary, so make the most of your budget by buying where you can.

- When buying, look for partners that can support your less-technical staff in implementation and beyond, so your in-house technical teams can focus on projects that will see the highest return for their efforts.

- When building, look for low-code no-code solutions that allow lower-level developers to do more, while reserving senior developers for areas of the project where they can make the most impact.

About the Research

The survey was conducted by Coleman Parkes in September 2020 and targeted 1,870 senior IT decision makers across multiple key sectors in the USA, LATAM, EMEA and APJ markets.

About Coleman Parkes

Coleman Parkes is a full-service B2B market research agency specializing in IT/technology studies, targeting senior decision makers in SMB to large and enterprises across multiple sectors globally. For more information, contact research@coleman-parkes.co.uk

About Rackspace Technology

Rackspace Technology is the multicloud solutions expert. We combine our expertise with the world's leading technologies — across applications, data and security — to deliver end-to-end solutions. We have a proven record of advising customers based on their business challenges, designing solutions that scale, building and managing those solutions, and optimizing returns into the future.

As a global, multicloud technology services pioneer, we deliver innovative capabilities of the cloud to help customers build new revenue streams, increase efficiency and create incredible experiences. Named a best place to work, year after year according to Fortune, Forbes, and Glassdoor, we attract and develop world-class talent to deliver the best expertise to our customers. Everything we do is wrapped in our obsession with our customers' success — our Fanatical Experience™ — so they can work faster, smarter and stay ahead of what's next.

Learn more at www.rackspace.com or call 1-800-961-2888.

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Appendix

Audience Profile

IT budget **average 1.2%**

Less than 0.5%	12%
Between 0.5%-1%	23%
Between 1-1.5%	35%
Between 1.5-2%	26%
More than 2%	4%

Number of employees

3,000-4,999	5,000-9,999	10,000+
19%	47%	34%

Decision making

Key influencer	Key decision maker	Part of a decision making team	Influence part of the process
30%	28%	23%	19%
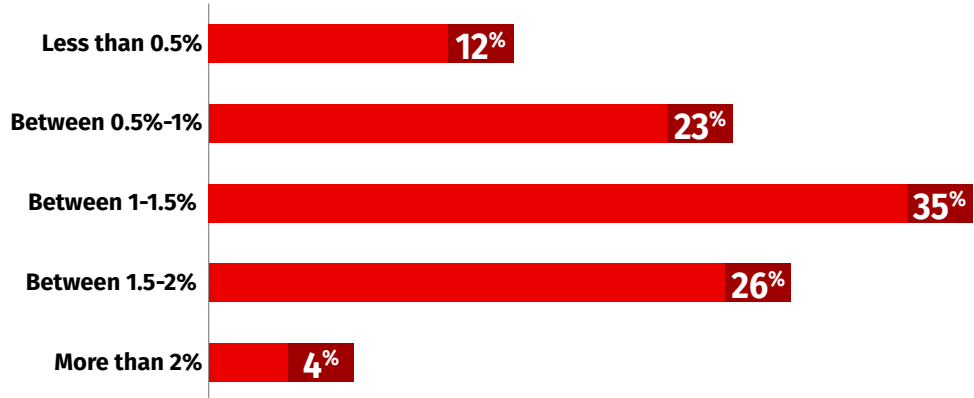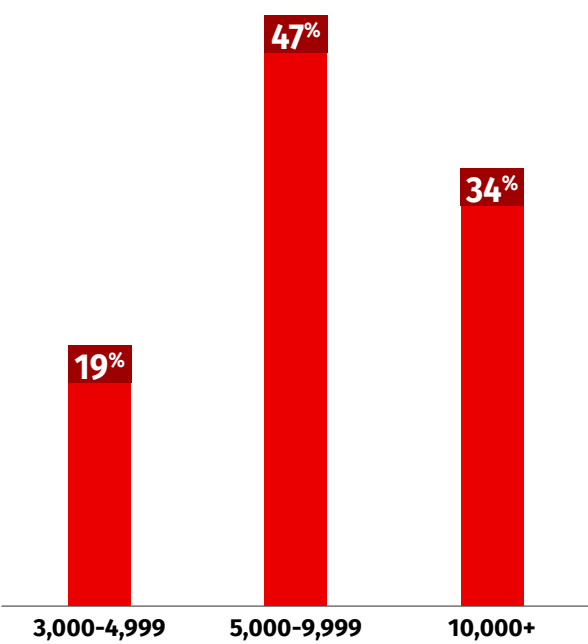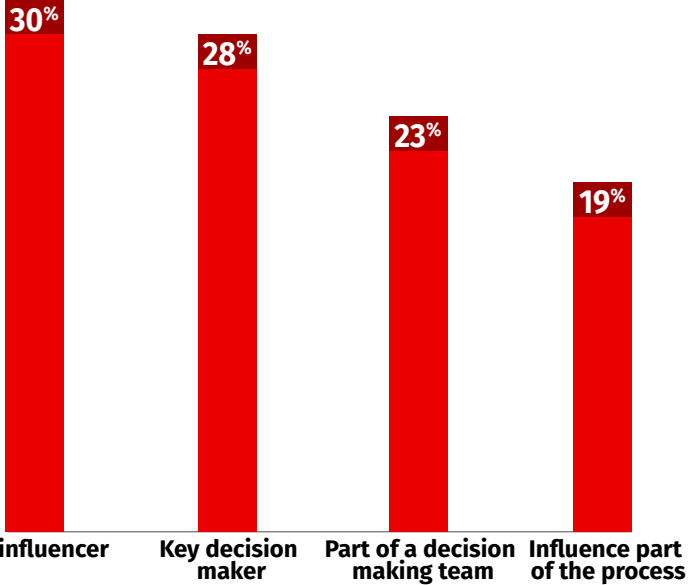
Year organization founded

average year 1988

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Audience Profile

Country

USA	16%
Australia	11%
Hong Kong	11%
UK	11%
Germany	11%
Singapore	10%
Netherlands	10%
Mexico	7%
Colombia	7%
Middle East (UAE)	5%

Job title

IT Director	34%
Head of IT	23%
Head of Infrastructure	16%
CIO	12%
CTO	7%
COO	8%

Annual revenue — average $40bn

Under USD $30bn	49%
USD $30-49bm	38%
USD $50-99bn	12%
USD $100bn or more	1%

Sector

Manufacturing	18%
Digital/Technology	17%
Retail	17%
Financial Services	17%
Government/Public sector	16%
Media	16%

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