



REPORT

The STATE OF

LOW-CODE/NO-CODE

a global survey of 1000+ leaders that have adopted or consider adopting low-code/no-code

2021

ACCELERATE 

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A GLOBAL SURVEY OF 1,000+ IT, DIGITAL AND BUSINESS LEADERS

Digital transformation is high on the agenda of many companies today, and adopting new technologies to automate processes is a key part of the roadmap. However, limited resources, technical debt, risk and change management are often significant hurdles to address.

Research has shown that low-code/no-code can be a game-changer by putting technology to automate processes and design applications directly into the hands of those who know their processes best: business users. Beyond escaping the initial IT constraints, low-code/no-code technologies place tools in the hands of the business users who are best able to identify and enable process improvements and innovations and continue to adapt them over time. The current shortage of software developers has left up to 1.7 billion knowledge workers seeking a way to automate their processes.

Not only can low-code/no-code tools reduce the demands on IT departments, but they can also drive digital transformation and enable process automation.

To help organizations better understand the current state of low-code/no-code adoption and its role in digital transformation, we set out to research how various organizations in our community are facing the digital transformation pressures of today, where exactly they are on that journey, and the role of low-code/no-code.

Our first annual global survey on the State of Low-Code/No-Code looks at the goals and challenges of digital transformation and process automation and uncovers the readiness of organizations to adopt low-code/no-code technologies as part of their transformation strategy.

From December 2020 to January 2021, we surveyed 1,022 IT, digital and business leaders from our community spanning various industries and regions including the Americas, EMEA and APAC, who have adopted or are considering adopting low-code/no-code technologies. Collectively, there were responses from more than 90 different countries.

The global online survey targeted senior leadership, digital-line-of-business managers, and those responsible for digital transformation in their companies. Respondents also hailed from various organization sizes including SMB, corporate and enterprise levels. Looking beyond Creatio's customer base, we asked respondents questions about their plans for digital transformation, the role of low-code/no-code and automation in their plans today and the challenges and opportunities for low-code/no-code in the future.

We're excited to share the insights from the research.

HIGHLIGHTS:

The survey results showed overwhelming support between the success of digital transformation and adoption of low-code/no-code technology.

We found that the momentum toward adopting low-code/no-code tools to achieve digital transformation and process automation is growing.

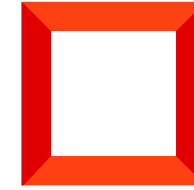


1. 43% of respondents said that the core barrier of digital transformation is a **lack of skilled resources**.
2. Despite COVID-19 and the global pandemic, **95% of respondents pushed forward with their digital transformation** initiatives.
3. **Out of 3 citizen developers, 2 are IT-related** users (system admins, business analysts, software integrators), while 1 is a business user.
4. Low-code is currently being **adopted primarily for custom app development** inside separate business units.

HIGHLIGHTS:

5. Currently only 6% of low-code development is done by business users, **without any IT involvement.**
6. The key benefit of low-code adoption is **accelerated time to market**, followed by reduced app development cost.
7. Low-code technology is equally **utilized for both customer-facing processes and middle & back office processes.**
8. **60%** of respondents claim a **lack of experience with low-code platforms** as the biggest obstacle in low-code adoption.
9. Only **13% of respondents are not regularly investing** in technological innovations.
10. 68% of respondents agreed that **upper management completely supported strategic investments** into technologies.





DRIVING TOWARD DIGITAL TRANSFORMATION

In our study, we found, not surprisingly, that the pressures of 2020 have driven the acceleration of digital transformation, as companies rapidly shifted to remote work and anywhere operations. From marketing to sales to customer service to production, companies invested in technologies to continue serving their businesses and customers. Organizations had to react and act fast to ensure high productivity and engagement levels for employees to be able to execute their strategies and not only serve, but support customers in unprecedented times. Digitizing processes became inevitable even for the most old-fashioned businesses that believed their models were set in stone.

BARRIERS TO DIGITAL TRANSFORMATION

The results showed that **43%** of respondents believe that **THE CORE BARRIER OF DIGITAL TRANSFORMATION IS A LACK OF SKILLED RESOURCES.**

43%

From an organizational perspective, lack of skilled resources is important as we think about digital transformation in the context of low-code/no-code platforms. Low-code/no-code can alleviate the demand on IT resources by enabling business users to perform more of the work themselves, while at the same time breaking down collaboration barriers between business and IT because it reduces the traditional back-and-forth between IT and the business in

requirements development, prototyping and testing, and other areas required in a traditional development process.

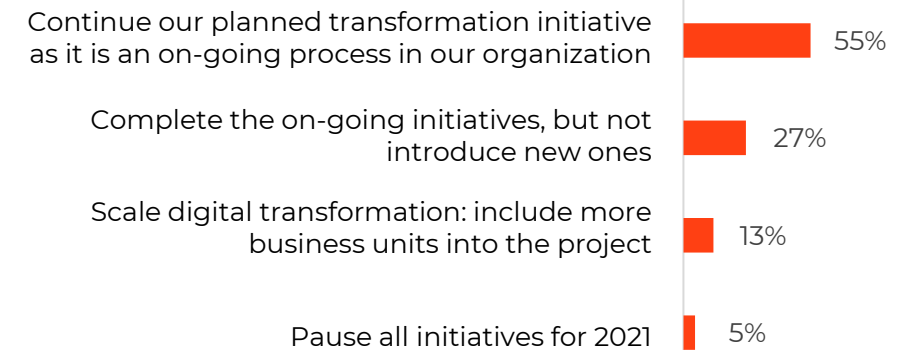
Furthermore, lack of expertise and lack of skilled staff can be addressed by low-code/no-code as no coding skills or special training are required to develop with these technologies. This is a trend that in the future will lead to a purely no-code development reality.

DIGITAL TRANSFORMATION IN 2021

With uncertainty still looming in 2021, it was interesting to uncover how digital transformation plans are unfolding.

WE FOUND THAT ONLY 5% PLAN TO COMPLETELY PAUSE INITIATIVES IN 2021.

Q4 The primary focus of DT in 2021



5%

It is clear that a majority of respondents plan to continue their digital transformation into 2021. The results show that most of the organizations observe a positive correlation between the success of their transformation initiatives and business resilience and financial performance. With the tremendous power digital adoption has on customer behavioral patterns, the new consumption model is here to stay, even after the pandemic.

Every company becomes a software company these days, as automation plays a significant role in a company's ability to adapt and speed up growth. While there is a significant gap between the demand and supply of skilled software engineers, adopting low-code/no-code tools along with policies and frameworks to govern the app creation process allows businesses to fulfill their needs for software development without increasing IT headcount.

DIGITAL TRANSFORMATION IN 2021

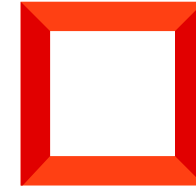
Only 13% of respondents
are **NOT REGULARLY INVESTING** in innovations.



The majority of respondents - 87% - make regular investments in innovations. To complement that answer, respondents also agreed by 68% that upper management supported strategic investments into technologies and over half of respondents agreed that company transformations are accepted fast and easily among employees. These findings highlight a new enthusiasm for digital transformation initiatives,

a counterexample to what we may typically hear regarding employees' keenness for change.

An important part of the success of digital transformation efforts is the support of managers at all levels – as well as employees – in supporting innovations and process changes.



LOW-CODE: THE TRANSFORMATION ENABLER

LOW-CODE ACCORDING TO REGION

In our study, we found that **NORTH AMERICA IS A LEADING REGION IN TERMS OF LOW-CODE/NO-CODE technology adoption.**

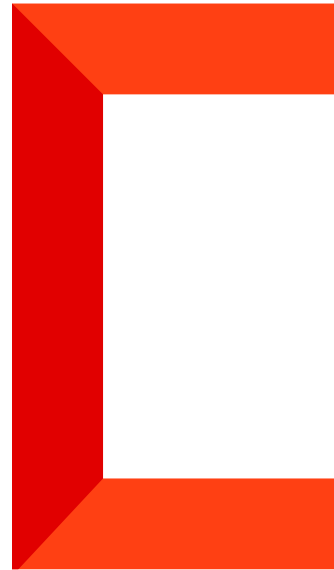
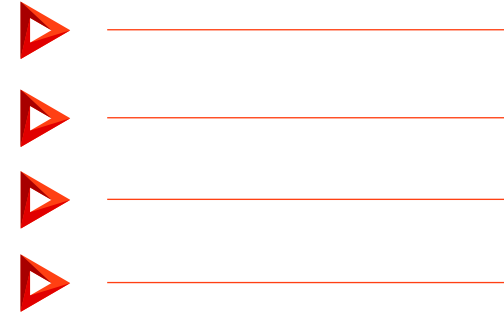


North American companies have traditionally been earlier adopters of technology innovations and historically more likely to view information technology as an investment rather than just a cost center. As such, the North America region accounts for the largest low-code/no-code market share serving as a base for the world's leading low-code/no-

code platform vendors. The market is overseeing growing competition from other fast-developing regions such as Asia Pacific and the Middle East. This is the result of evolving industry verticals, accelerated digitalization due to the COVID-19 pandemic and growing industrialization.

LOW-CODE: PRIMARY USE

LOW-CODE IS CURRENTLY BEING ADOPTED PRIMARILY FOR CUSTOM APP DEVELOPMENT INSIDE SEPARATE BUSINESS UNITS such as sales and marketing, service, HR or finance.



As more and more organizations are choosing to digitize their operations, all while developing new solutions to meet fluctuating consumer and employee needs, IT departments are falling under a workload strain. The strain, not only amplified by an increasing demand for digitization, is further exasperated by a shortage of skilled software developers, as well as an overworked IT department. Such hurdles pose significant challenges for organizations when allocating resources and trying to digitize.

Sharing the IT reins with non-IT employees empowers those employees to become business users and the owners of their

technologies. Business users can create their own apps and processes, define system logic, build custom interfaces, integrate their apps with other solutions and build analytics with low-code/no-code platforms. In this instance, everyone becomes a citizen developer.

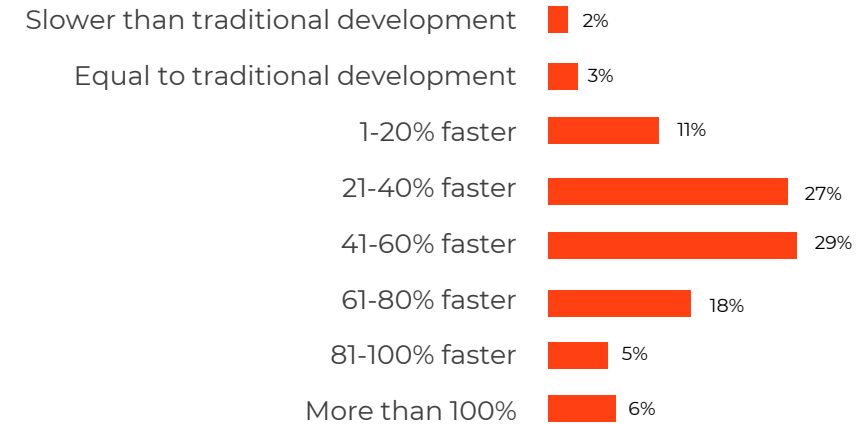
At the same time, IT continues to play an even more important role within the organization, being responsible for security and system administration, complex integrations and overall consistency of the IT landscape according to the low-code/no-code development framework.

THE KEY REASONS TO USE LOW-CODE

The key benefit of low-code adoption is

ACCELERATED TIME-TO-MARKET, FOLLOWED BY REDUCED APP DEVELOPMENT COST.

How much faster is low-code development comparing to traditional development?



Respondents shared their reasons for utilizing the coming-of-age technology. The top two responses that stood out: accelerated time-to-market and reduced app development cost. It is evident that organizations need to be at-the-ready to adapt to new changes and demands, both stemming from

customers and employees. With the pace of change only accelerating, business agility has become more important than ever. With low-code/no-code technology as a complementary solution, organizations can quickly adapt to whatever comes their way, all while reducing app development costs.

Low-code/no-code technologies are helping organizations of all sizes meet the digital transformation challenge, putting tools in the hands of business users to automate and innovate.



REBECCA WETTEMANN

Tech industry analyst and thought leader,
CEO at **VALOIR**

LOW-CODE: BUSINESS AND IT COLLABORATION

Currently only 6% of low-code development is done by business USERS, WITHOUT ANY IT INVOLVEMENT.



Currently, only 6% of low-code development is done by business users, without any IT involvement. While the adoption of no-code tools by business users is higher, the low-code development approach still requires a basic understanding of underlying technologies and IT acumen. Low-code/no-code technology, however, presents a new ideology in the tech field, one where business users take up the reins of process automation and app development for their business units without special training.

Moreover, the trend is towards erasing the distinction between

simple no-code tools for citizen developers and more comprehensive low-code tools for developers with IT backgrounds. Low-code will shift to a no-code development approach, offering no-code platforms with powerful capabilities for enterprise applications development of any complexity without coding skills or specific training.

NOTE: While empowering everyone to become a developer, companies need to ensure IT staff takes ownership in security and system administration, complex integrations and overall consistency of the IT landscape.

LOW-CODE: LACK OF EXPERIENCE

60% OF RESPONDENTS CLAIM A LACK OF EXPERIENCE with low-code platforms as the biggest obstacle in low-code adoption.

60%

We found that lack of knowledge is the biggest barrier to the adoption of low-code/no-code tools today, highlighting the need for ease of use and effective training. The lack of experience and expertise in low-code/ no-code tools usage can be addressed by adopting industry best practices, policies and frameworks for app development. This way IT departments can easily govern the process of operation automation and solution delivery by citizen developers across the entire organization. Thanks to universal reference policies, a low-code/no-code development approach will ensure ultimate alignment for any solution created without coding frameworks they could use.

Additionally, out-of-the-box processes and applications accelerate time to

market, thus boosting productivity and results, while reducing labor-intensive workloads. These ready-made templates of processes and apps serve as a basis for new solutions that business users can deliver quickly without specific IT expertise or skills. Moreover, reassembling capabilities thanks to these prepackaged composable modules is a matter of hours or days, not weeks or months.

Training for employees to mitigate the lack of experience and/or expertise, providing all users with proper tools, policies and reference materials can also be helpful. This way, when users take the initiative to automate a process for their department, they ensure it aligns with operations in other departments and units.

High usability and access to training and support are critical for successful adoption of low-code solutions beyond early adoption. Leaders such as Creatio have invested in both, providing friendly and intuitive user interfaces and broad training that address the diverse skill and technical aptitude levels of business users.



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Tech industry analyst and thought leader,
CEO at **VALOIR**

LOW-CODE: ONE-STOP-SHOP

Low-code technology is equally utilized for both customer-facing processes, as well as middle and back-office processes.

Low-code/no-code technology is a one-stop-shop that can address a wide range of use cases for all business units, including sales, marketing, service, finance and operations/management. During our research, we found that IT, digital and business leaders see value

when a low-code/no-code approach is implemented company-wide. This allows every enthusiastic employee to become an owner of technologies their department uses for improved department performance and contribute to better business outcomes.

CRM applications – marketing, sales, and service – are the most common starting points for automation because low-code capabilities within many CRM solutions enable business users to take the lead on automation efforts. However, other areas like human resources and finance are ripe for automation, and low-code tools with high usability and data connectivity offer great opportunities for HR and finance leaders to drive innovation.



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LOW-CODE IS ONLY EMERGING, FAR FROM REACHING ITS FULL POTENTIAL

Majority of the respondents believe LOW-CODE IS FAR FROM REACHING ITS FULL POTENTIAL, leaving room for even more significant impact on organizations' resilience and business outcomes.



The low-code/no-code market is emerging. The last year accelerated the adoption of the low-code development approach, which proved successful in enabling companies to rapidly respond to change. However, among organizations already taking advantage of low-code/no-code, the majority believe a lot of potential remains untapped.

Businesses have been successful at achieving benefits from empowering less tech-savvy employees to be able to develop solutions that accelerate processes within their departments. Now IT, digital and business leaders are to scale this initiative organization-wide to uncover the full power of fostering citizen developers that can automate any business idea in minutes

thus increase the workforce productivity and deliver on customer expectations. Respondents are confident companies will continue to amplify the positive impact and achieve operational excellence as low-code/no-code sees increased adoption and wins a bigger market share.

Note: Low-code/no-code development approach requires a shift in mindset. Not only do organizations need technology for process automation, but also to change their policies and culture to give employees the freedom to create applications they need at their workplace.



PROCESS AUTOMATION LEVELS

UP TO 30%
**OF PROCESSES ARE NOT
AUTOMATED AT ALL**



**ONLY UP TO 10% OF
BUSINESS PROCESSES
ARE FULLY AUTOMATED**

Even though research firms like Gartner foresee the upcoming rise of such trends as hyper-automation, the current depth of process automation among organizations of all sizes is still low. Given complex legacy workflows in organizations from industries such as financial services, manufacturing, or professional services, the path to full-blown automation requires more intelligent solutions capable to extend the responsibility for process automation across both front and back-office teams.

Of what is already automated in the respondents' organizations, a majority utilized out-of-the-box capabilities within existing applications such as CRM, followed by out-of-the-box applications with some custom coding. With the rise of low-code platforms for process management and CRM, we expect this trend to change in the upcoming years as more organizations will be able to manage complex process automation projects self-sufficiently.

LOW-CODE/NO-CODE: LOOKING AHEAD

The year 2020 separated the digital leaders from laggards in a significant way. It was clear during this period that businesses needed to transform, and fast, to better serve their markets. Organizations prioritized digital transformation, automation and low-code/no-code platforms to fuel operational efficiency. Low-code/no-code helped them automate faster and leverage data in legacy applications with less development and fewer resources.

LOW-CODE/NO-CODE –
LOOKING AHEAD

As companies continue or accelerate their digital transformation efforts, it is clear that low-code/no-code is a key enabler of that transformation, enabling business users to drive process automation at a scale and pace that was simply impossible with traditional development models. With automation of more processes a top priority for organizations in 2021 and beyond, low-code/no-code is here to stay. With mobile application development and the development of custom applications to meet specific departmental or functional needs as top priorities, low-code/no-code is enabling business users to automate both internal and customer-facing processes.

Today, not only is low-code/no-code here to stay, but the trend is becoming even clearer. Before we know it, the simple tools that distinguished citizen developers from software development teams will no longer exist. Low-code and no-code will amalgamate into a single market segment that will be enterprise-worthy and powerful, but at the same time, citizen developer easy-to-use.

Currently, low-code/no-code technology is poised to disrupt traditional business models. As today's enterprises undertake digital transformation, they become software-driven companies, meaning, developers are on-site hand-coding software. This is the driving factor behind enterprise DevOps across industries. Low-code/no-code, however, is disrupting this pattern, as organizations realize that doing away with hand-coding altogether will lead to faster and more successful results. Low-code/no-code is already here, and its only purpose is to turn organizations into digital leaders. The merging of low-code and no-code will act as a catalyst in helping the future workforce transition successfully and better serve industry needs.

Although low-code platforms have been around for decades, the challenges of 2020 highlighted both the need for digital transformation and the hurdles facing companies that didn't have modern technologies such as low-code in place. With the need to rapidly move business and working models to remote work, and increasing demands on IT, those with low-code platforms in place were able to adapt more quickly, enable remote business users to make changes to processes, and continue to adapt to changing conditions.

AFTERWORD

by Rebecca Wettemann, CEO at Valoir

The future of low-code/no-code is now. Creatio's study shows that low-code/no-code is gaining traction, and that numbers surrounding adoption will grow dramatically in 2021. Technology innovations are often ahead of their time, and low-code technology is no exception.

Today, humans are catching up with technology and taking advantages of the benefits, delivering greater innovation, faster time to value, and the productivity and efficiency gains from automation.

In the late 1990s, the concept of Web services – reusable standards-based components that could be assembled and reused to execute business processes – represented a giant leap forward from brittle custom code. In the last few decades, innovations in drag-and-drop usability, declarative programming, and business process modeling (BPM) dramatically cut the initial and ongoing costs of enterprise software.

In the past decade, three key factors drove an increasing adoption of low-code approaches to business automation:

- ▶ **Cloud.** The rise of cloud computing, with browser-based configuration and the ability of users to try, buy, and configure on their own without IT, led to greater experimentation by IT and non-technical users. It also educated business users on the potential of low-code platforms to deliver innovation without waiting for IT.
- ▶ **Community.** Online communities of users, YouTube videos, blogs, and other resources – some created by the vendors themselves, like Creatio's Community – enabled business users to share ideas, solve problems, and provide a virtual user support group for low-code platform adoption.
- ▶ **Communications.** Those same online communities shared the real business results non-technical users were achieving with low-code tools, and the concept of "citizen developer," broadly marketed by low-code technology vendors, took hold.

Jump to 2020 and a ripe situation for low-code/no-code technology: The rapid move to work from home (WFH), coupled with the need for rapid problem solving and process changes, empowered employees to take more initiative and more control of their applications and daily workflows. Employees with more autonomy explored low-code/no-code technologies as a means to streamline and automate existing and new work processes. In Valoir's 2021 Predictions, we predicted the accelerated adoption of low-code/no-code platforms this year and beyond, driven by the progression from resilience to innovation that started in many companies in 2020.

Throughout the history of low-code, an ongoing theme has been limited IT resources and challenges to IT/business alignment. Low-code platforms lower those hurdles to benefiting from technology, by accelerating development cycles, reducing tactical dependence on IT for development, and enabling business users to drive digital transformation.

This recent research shows, companies are seeking to continue or accelerate digital transformation and automation in 2021. Beyond escaping the initial IT constraints, low-code/no-code technologies enable them to put tools in the hands of the business users who are best able to identify and enable process improvements and innovations, and continue to adapt them over time.

I applaud Creatio's efforts to be a thought leader in the low-code/no-code space. This research highlights the company's understanding of the innovations and challenges in the low-code/no-code space as well as its long history of providing no-code/low-code capabilities to business users around the world.



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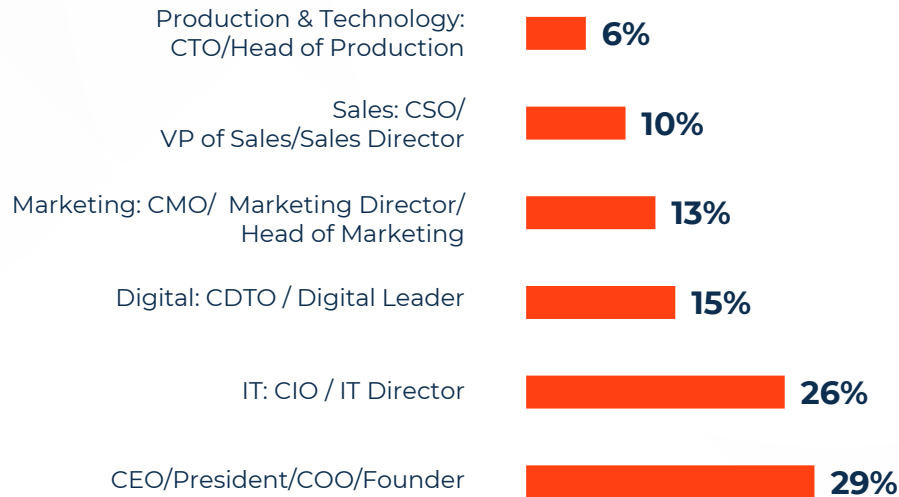
SURVEY DEMOGRAPHICS

The State of Low-Code/No-Code and Future Outlook Market survey targeted IT and Digital Leaders and Senior-level Executives through various third-party channels to ensure an extensive cross-section of respondents were surveyed and not just Creatio's clients. All surveys were conducted online.

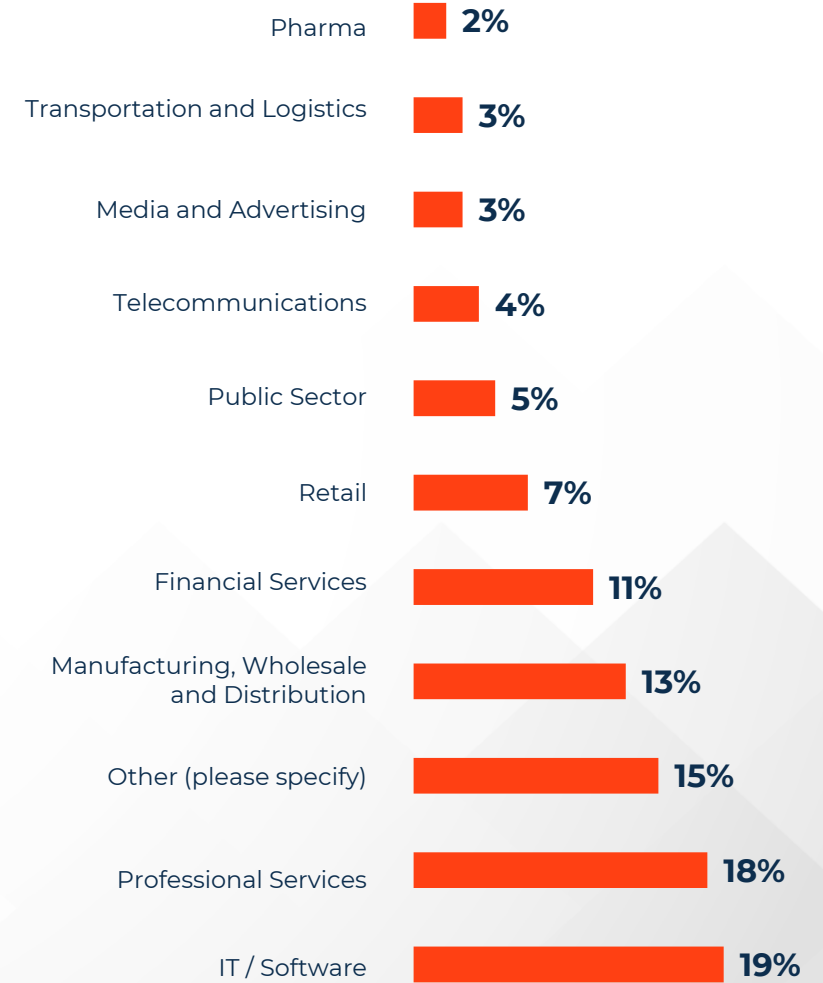
JOB ROLES

The majority of the respondents were IT leaders including IT Directors, as well as C-Level Executives and Senior Management who represented over a thousand different companies worldwide.

Question: What is your current job role?



Question: What is your company's industry?



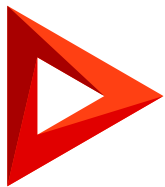
ABOUT CREATIO

Creatio blends an intuitive low-code platform, best-in-class CRM and a robust BPM in a single solution. On top of a low-code process automation platform called Studio Creatio, the company offers three CRM products for marketing, sales and service. These products can be sold and used separately or bundled.

We also offer a range of ready-to-install/out-of-the-box composable apps, processes and templates on Creatio Marketplace that extend Creatio functionality.

The future is no-code, where everyone can be a developer. The world of business doesn't require the expansion of IT departments, but rather the encouragement of citizen developers via the implementation of low-code platforms. An advanced low-code platform saves time, resources, and enables employees to automate their daily tasks so they can tackle bigger and more creative assignments. In the modern era, anyone can be a developer—a citizen developer—and the companies they work for will reap the benefits.

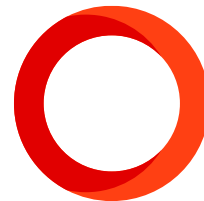
CREATIO **SUPER** POWERS



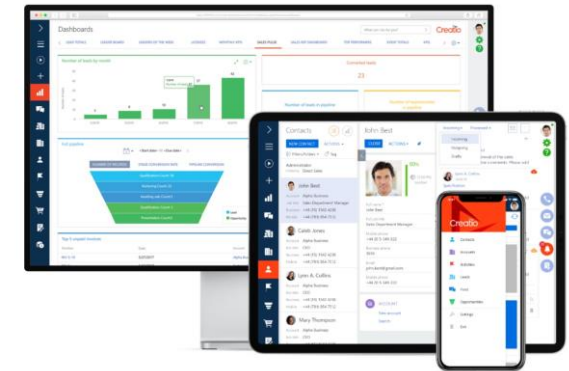
BPM ENGINE
to change processes
faster



LOW-CODE PLATFORM
to make everyone
a developer



UNIFIED CRM
to align sales, marketing
and service



Empowering mid-size and large enterprises
to accelerate operational & customer facing processes

TRY IT FREE