

White paper

Software Development Trends to Look Out for in 2022

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It is not unusual to see software development trends change year after year. The pandemic has only accelerated the whole process, and it seems that the trends are changing even faster. What was once considered as acceptable practice in software development might no longer be the case in the foreseeable future. This is why startup founders and big corporation managers should be aware and well-informed of where all the software industry trends are heading to and how to strategize in the best possible app to develop and place an app.

Digitalization accelerated throughout 2021. As it was predicted, there was a greater investment in delivering omnichannel experiences, a greater focus on privacy was put, Google almost phased out 3rd-party cookies, and new technologies have been greatly adapted across all sectors.

This trend will most definitely continue to grow in 2022, with other development trends being the most important ones:



Rapid growth of the IT sector

The IT industry was one of the industries affected with the COVID-19 pandemic. This resulted in project delays for many companies and investment reductions, but even so, it managed to attain a strong position when compared to other industries.

As digital transformation becomes more and more common, software transforms the way companies conduct business, what they do and how they deliver their services to their clients. That is why software development is becoming more important as we speak, and it is going to be a game-changer for many companies and businesses.

According to information gathered by the consulting company Bain & Company, tech firms that have technology as a core component of their business have seen the most growth in the last year, and will continue to do so in the future.

Only since 2015, these companies have generated 52% of the overall market value growth.

However, it is predicted that every firm is slowly becoming a software business to a certain extent, which is why we will be able to see a rapid growth in the IT sector in 2022 and the following years.

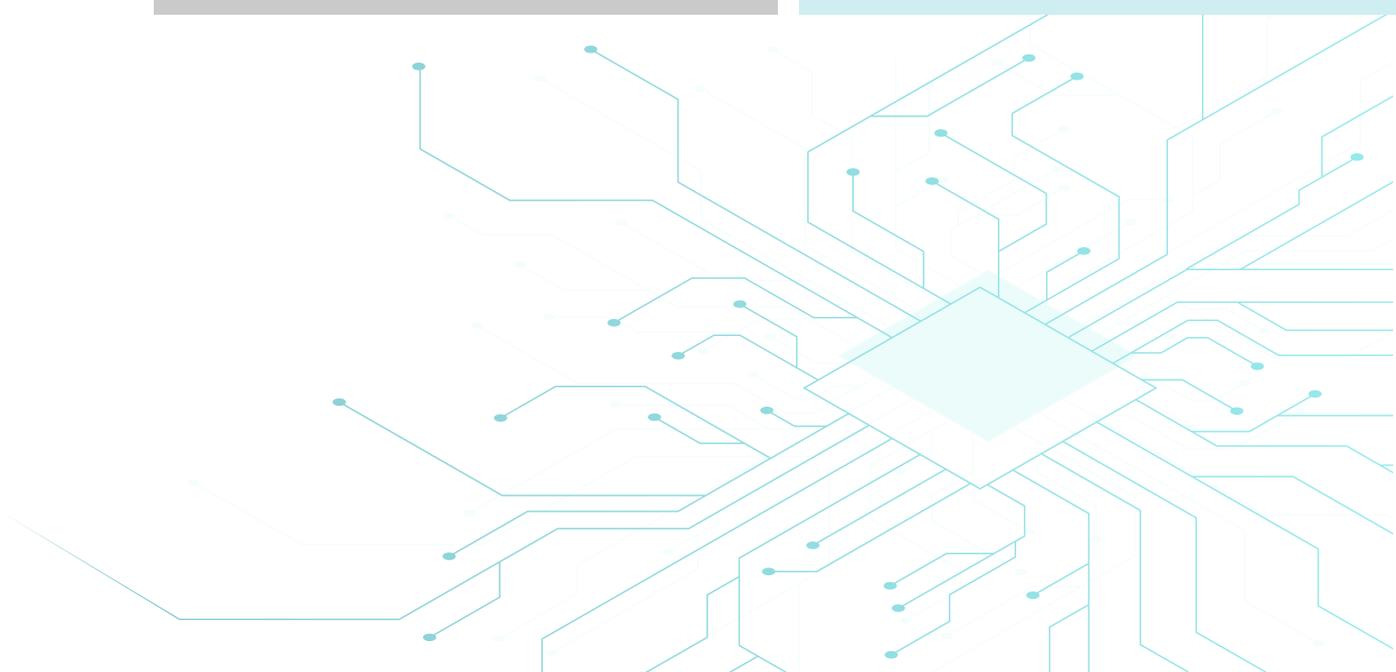


The demand for outsource continues to grow

The economy is close to full employment and the recruitment becomes increasingly difficult. Due to the industry's ever-changing needs and the difficulties to find talented IT specialists in the local market, many companies turn to offshoring opportunities. These include offshoring and nearshoring, the outsourcing of activities to an organization in a country nearby with lower average wages.

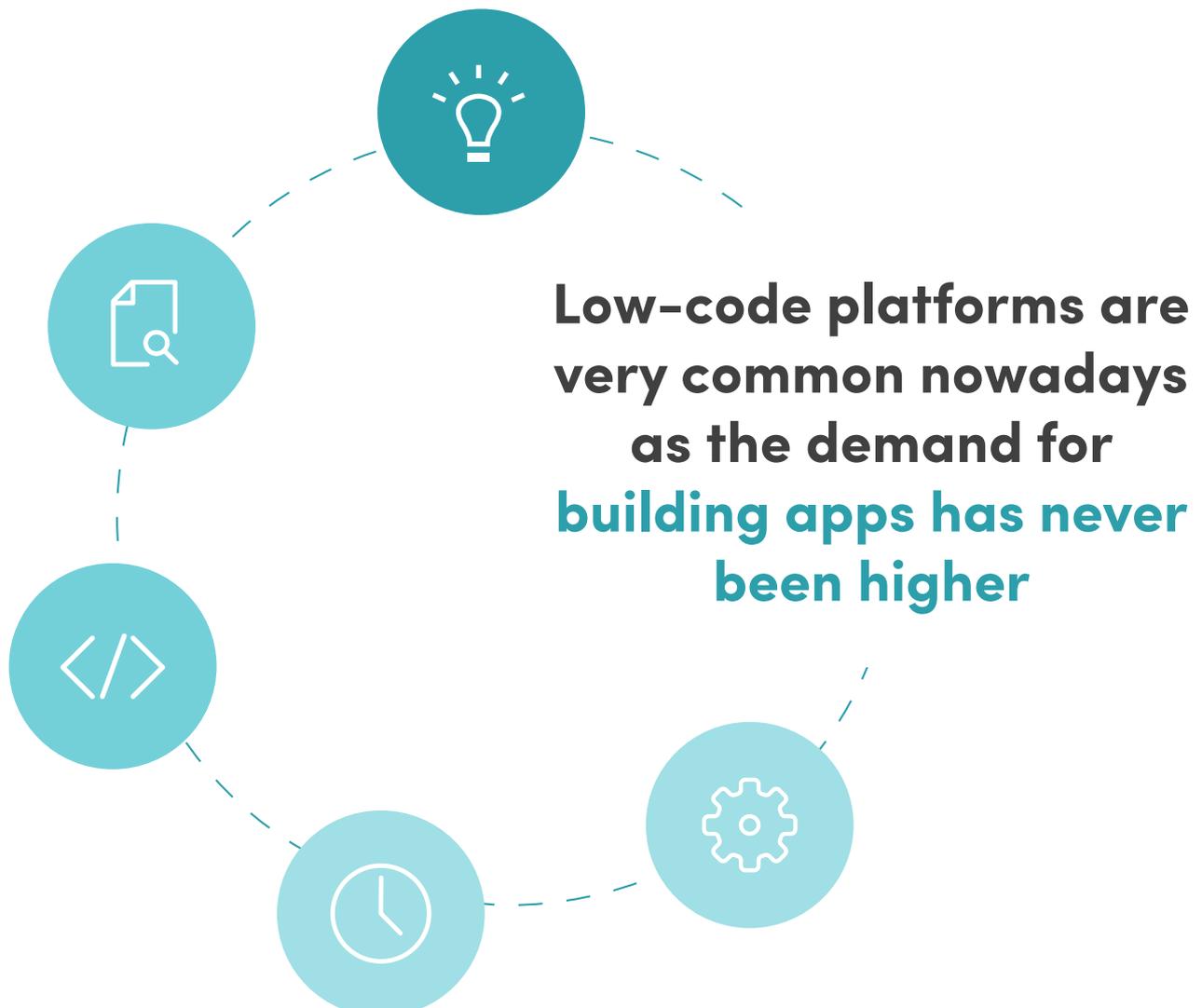
Nearshoring is becoming more and more popular as it offers less cultural differences, no struggles with different time zones, shorter travel to work together on projects, and direct contact with the developers.

The outsourcing teams can do a variety of tasks, such as coding, testing and product management. These teams are also very competent in a variety of programming languages. Apart from these benefits, outsourcing also helps companies to get the most skilled specialists at affordable prices.



Low-code development

Another trend to look out for in 2022 is low-code development. The term “low code” refers to the use of small amounts of code in order to create software. Because of low code and such platforms the process of developing an app can be very quick, and it doesn't require plenty of skills from developers. Another reason why low-code is popular is because the demand for software developers exceeds the available supply, meaning that companies have higher chances of finding people who can help them using low-code. Although low-code development is not the most reliable and long-term solution for all projects, it is still a trend that will play a significant role in 2022.



Robotics will be more important

It is not a secret that robotics will become more prevalent in 2022 and future years. We are currently living in the Fourth industrial revolution (also known as Industry 4.0), which heavily relies on interconnectivity, automation, machine learning and real-time data. It is because of Industry 4.0 that we witness improved productivity and efficiency.

Many industries will benefit from the advancement of robotic-based automation, including the healthcare, agricultural, automotive and supply-chain management industries.

Labor shortage is also a challenge that many industries will be facing for several years in the future, and COVID-19 only made this a burning matter. In 2022, robotic process automation (RPA) is expected to expand and become a standard business technology.

Nanorobotics (small sensors with limited processing power) are also becoming very popular and will continue to do so in the years to come.

The new era of cloud computing

Migrating to the cloud is not a new trend, it was used in software development for quite some time. Because of the convenience of the cloud, more and more companies of all sizes and purposes are switching to cloud computing, making this one of the most dominant software development trends for 2022.

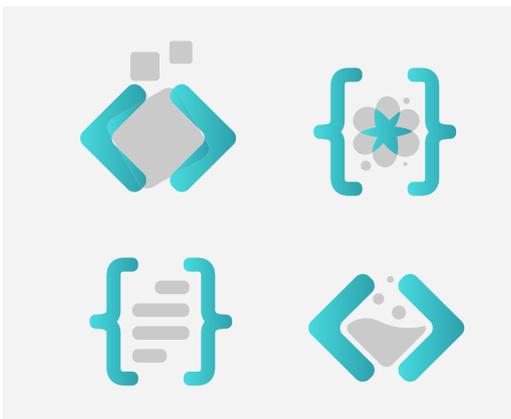
Although many businesses opt to place their applications and systems in the cloud because of easier maintenance and storage, a big number of them create complete working environments with the help of cloud services and tools that cater for effective team collaboration. Another benefit of cloud computing is that it's a great facilitator for remote work. Because of that, SaaS, IaaS and PaaS solutions are becoming more in demand.

Automated code review

Because of the amount of code that is being produced today, human reviewers find it very difficult to keep up.

This created the opportunity for automated code review tools, which can help testers solve this problem by identifying potential problems, errors and bugs very quickly.

Another benefit is that they make it easier to maintain coding standards in the organization.



Devops - DevSecOps

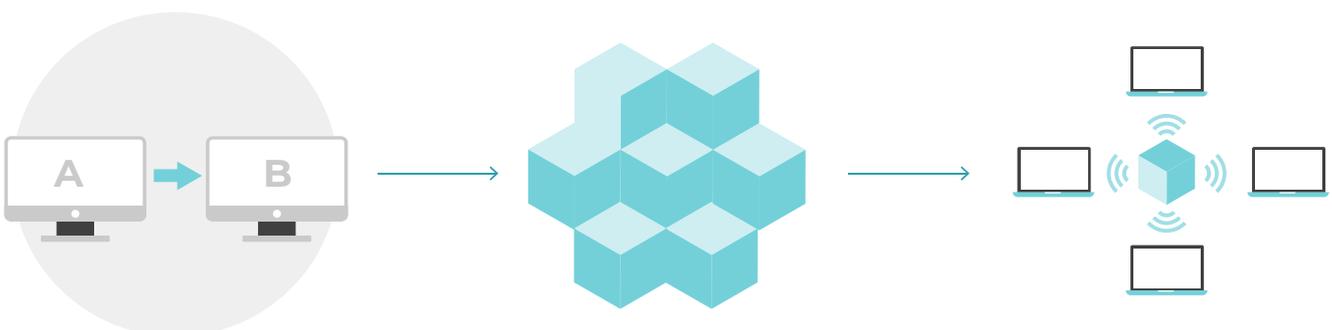
When we speak of security, it is also important to mention one of the key cybersecurity trends to observe in 2022 - DevSecOps.

DevSecOps is the mixture of development, security and operations brought together in order to improve the overall safety of the software product. **Some of the benefits of DevSecOps are the following:**

- ✓ Thanks to DevSecOps, software products are more secure as they are designed accordingly,
- ✓ Potential vulnerabilities are being detected and fixed earlier,
- ✓ The process of fixing bugs and vulnerabilities is streamlined

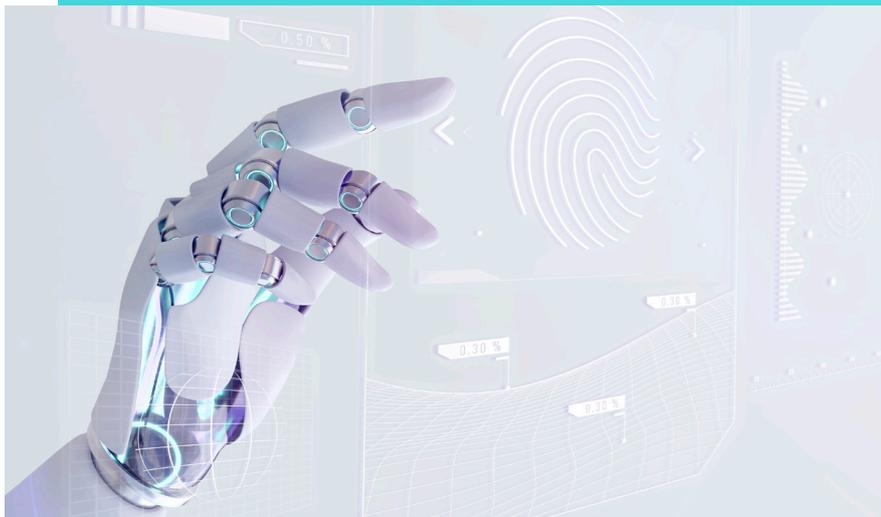
Blockchain-empowered security

As more processes depend on different technologies, the higher the risk and chances of vulnerability. That is why the majority of software solutions grows an important need for strong security, especially for businesses in the Fintech, healthcare, government, gambling and logistics industries. However, blockchain technologies do not only provide security to the operations, but transparency as well. Blockchain technology is encrypted from beginning to end and all information is stored into the database records safely. Because it is decentralized and digital, it is associated with a fingerprint, as each sequence of blocks is different and unique.



Artificial Intelligence + Machine learning

One of the trends for 2022 is that software development will be using AI and ML-driven approaches more often. Artificial Intelligence, in this sense, is designed to learn from the data in order to make predictions or create actions without being programmed for that. On the other hand, machine learning might even be a more significant trend than AI. This is so because it allows bigger predictive analytics and automated decision-making.



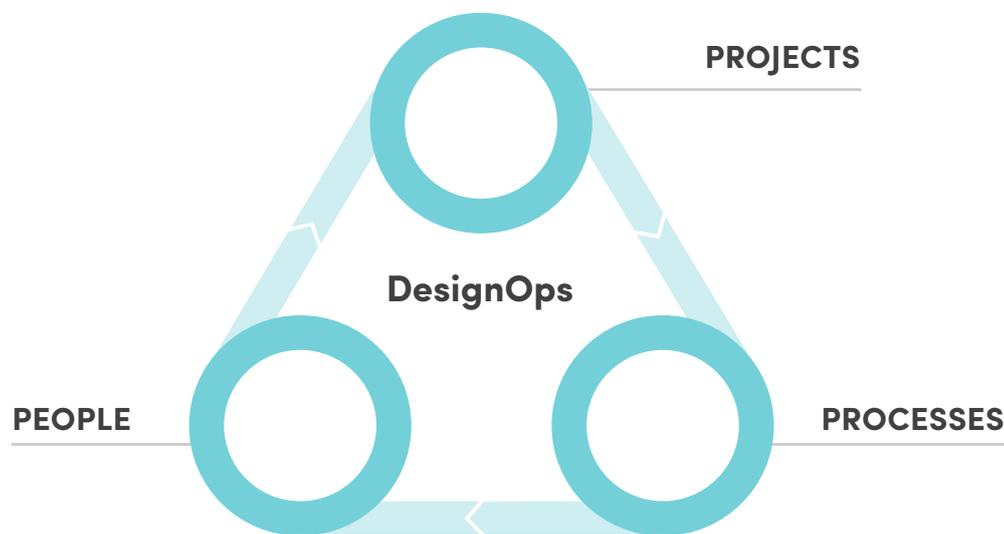
What are the benefits of using artificial intelligence and machine learning in software development?

- ✓ Software products don't have to be explicitly programmed in order to make predictions or take certain actions;
- ✓ Developers can use these approaches in order to meet the needs of their clients;
- ✓ Software products are more efficient and effective when powered by AI and ML technology.

DesignOps

DesignOps refers to the orchestration and optimization of people, processes and craft in order to amplify the design's value and impact at sale, and is considered as one of the most prominent software development trends for 2020. It refers to the collaboration between the design teams and the front-end developers, and it ensures the consistency of the product's experience from the first delivery.

The fact that organizations and businesses are pressured to launch more digital products and still meet user adoption goals, some of the things they need to think about are design at scale while at the same time minimizing technical and UX debt. That is why DesignOps will be pushed to the center of the stage.

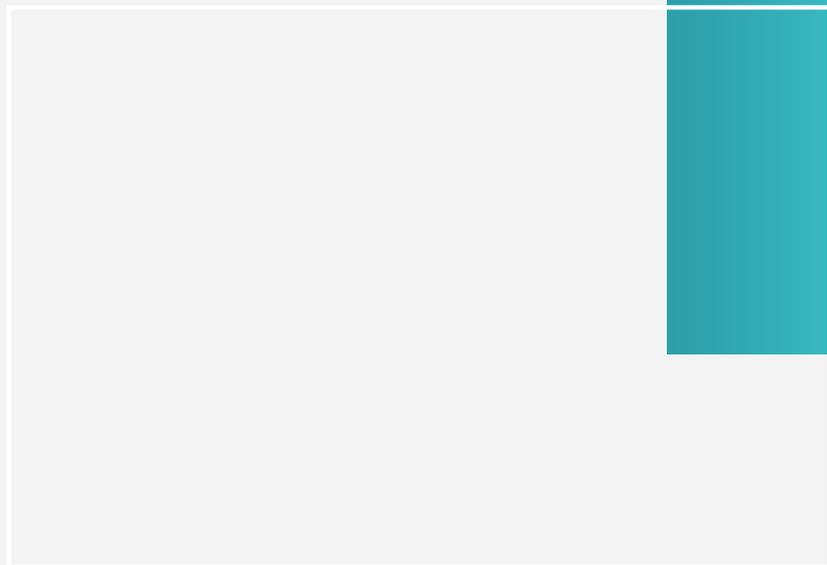


DesignOps is considered as one of the most prominent software development trends for 2020

Final word

It's practically impossible to make accurate predictions in this fast-changing industry, but some expectations are certain and we can be sure they will happen based on observable trends. Developers all across the globe are constantly being empowered which is one of the reasons for the arrival of the trends mentioned in this article.

Let's see what other new trends 2022 will bring. We're very excited about it.



2022

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