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Test Automation

Software Testing and Quality Assurance Trends in 2022





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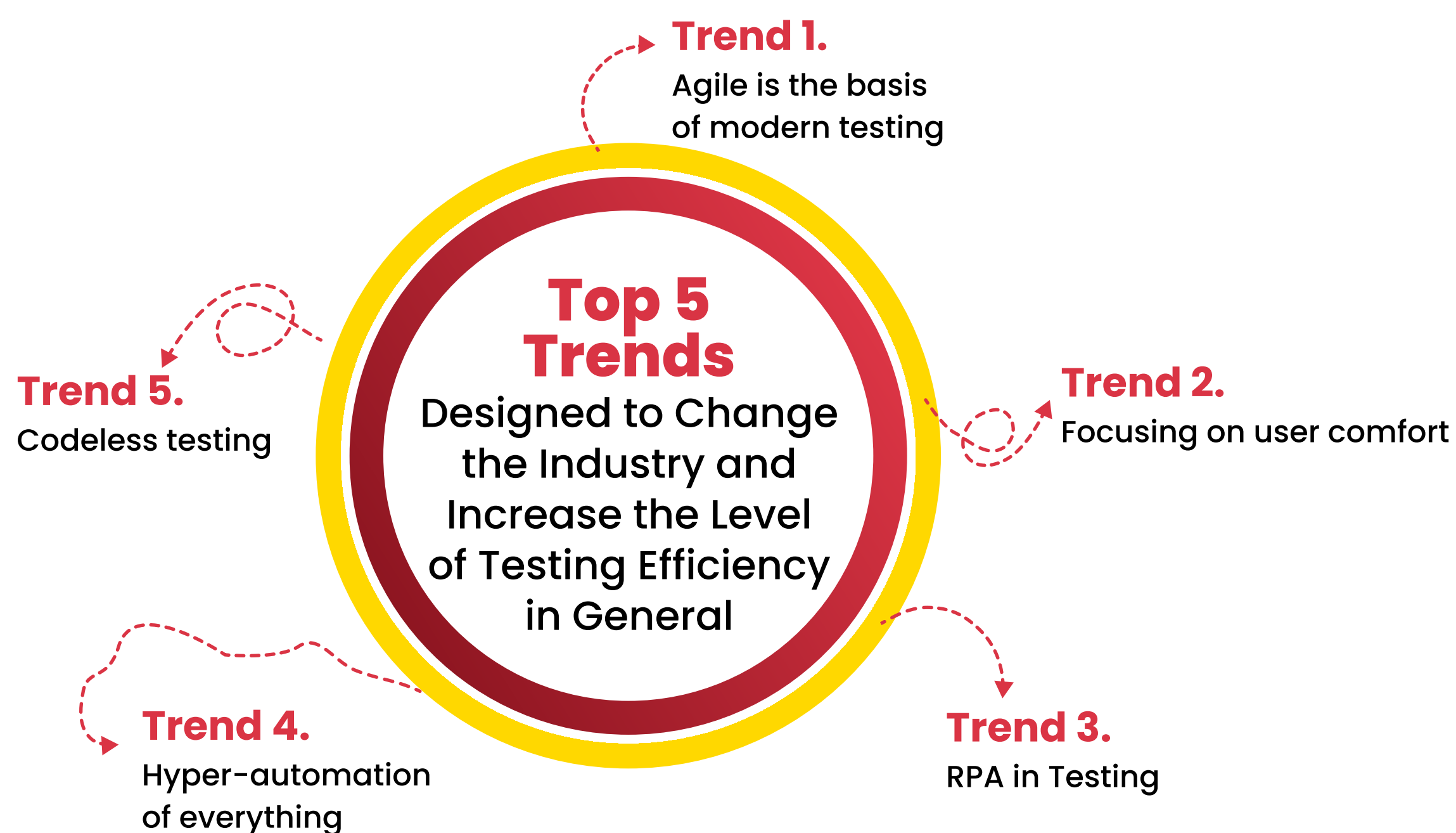
Digital technology has firmly established itself on the crest of a wave of innovation. They affect every sphere of human activity and all types of business to one degree or another. Naturally, app development for desktop, mobile systems, and browsers is entirely dependent on technological progress. This area actively uses new methodologies and advanced solutions and is the first to implement promising trends.



Automated testing of IT solutions is currently an integral part of the development process and one of the first to receive modern progressive tools to improve efficiency. According to a study by Verified Market Research, the industry is also actively strengthening its position in the market; the CAGR level is kept at 18.36%, and the projected value of the sphere by 2028 will reach \$63.9 billion. In the foreseeable future, automation will gradually transform into a more modern tool assuring the IT solutions quality. It will become possible thanks to the introduction of trending technologies and methods to optimize the industry's routine processes and specific tasks.

Top 5 Trends Designed to Change the Industry and Increase the Level of Testing Efficiency in General

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The modern approach to QA processes is far from ideal. This is confirmed not only by testing teams but also by business analysts. Often, investments in QA exceed its real efficiency, and here the problem is rather in technological support. The current tools do not fully cover the test needs, and highly qualified specialists are needed to create scripts. The future lies in simple things, such as codeless testing, delegating tasks to AI, and even full hyper-automation of processes with minimal control from QA experts.

Trend 1. Agile is the basis of modern testing

Agile methodology has been a favorite among developers and testers of IT solutions for over 10 years. Its key advantage lies in the lightning-fast reaction of the team to emerging challenges and the relative ease of their solution. It is also worth highlighting a variety called DevOps, which is characterized by the full involvement of all project participants up to the customer during and between sprints. This allows you to respond to changes, problems, or errors, correcting them literally on the fly.

Despite popularity of the technique and its efficacy, modern challenges demand updating the mechanics. Therefore, the modernization of the methodology is a trend that tops the list of trends from year to year. The current 2022 is no exception.



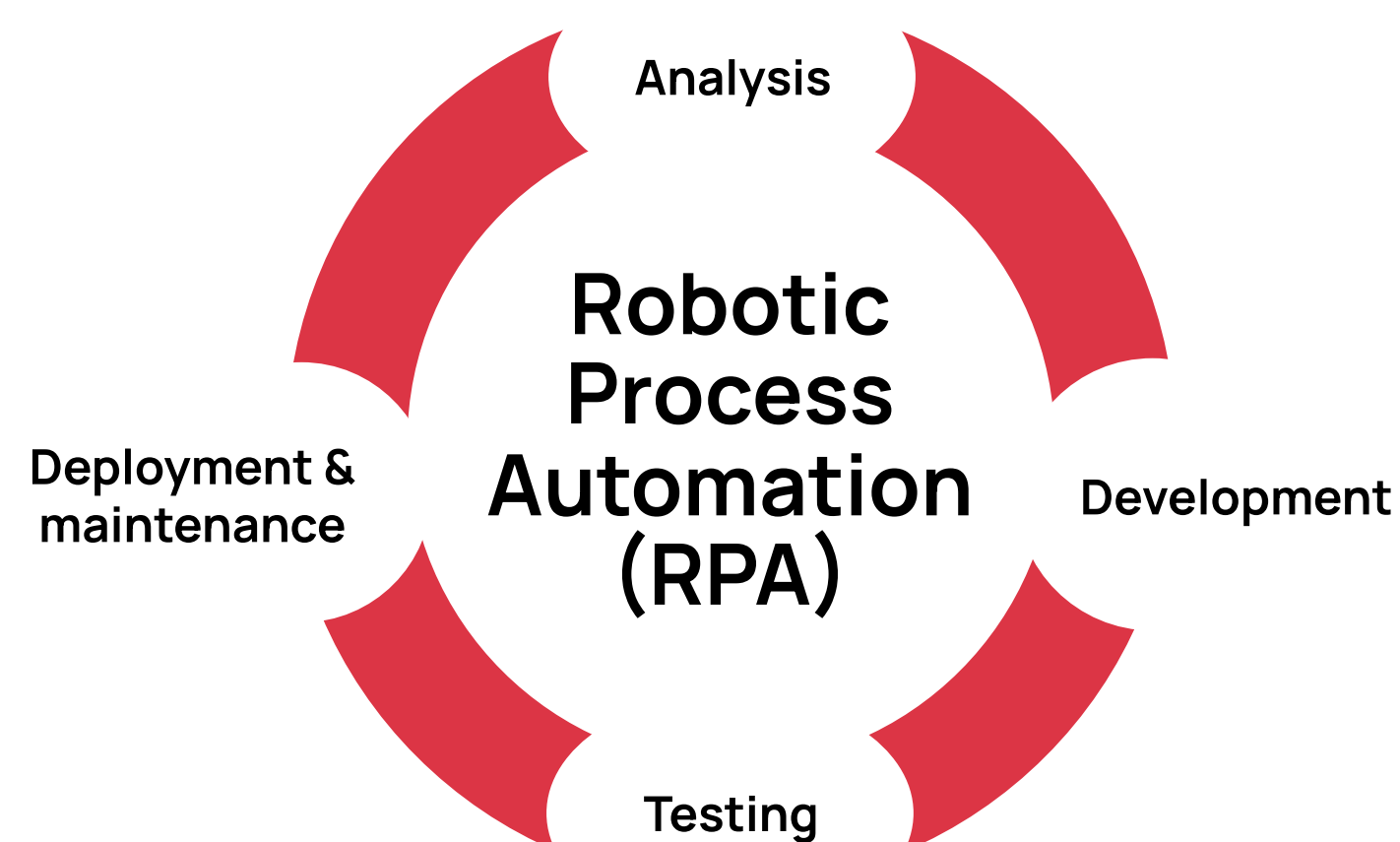
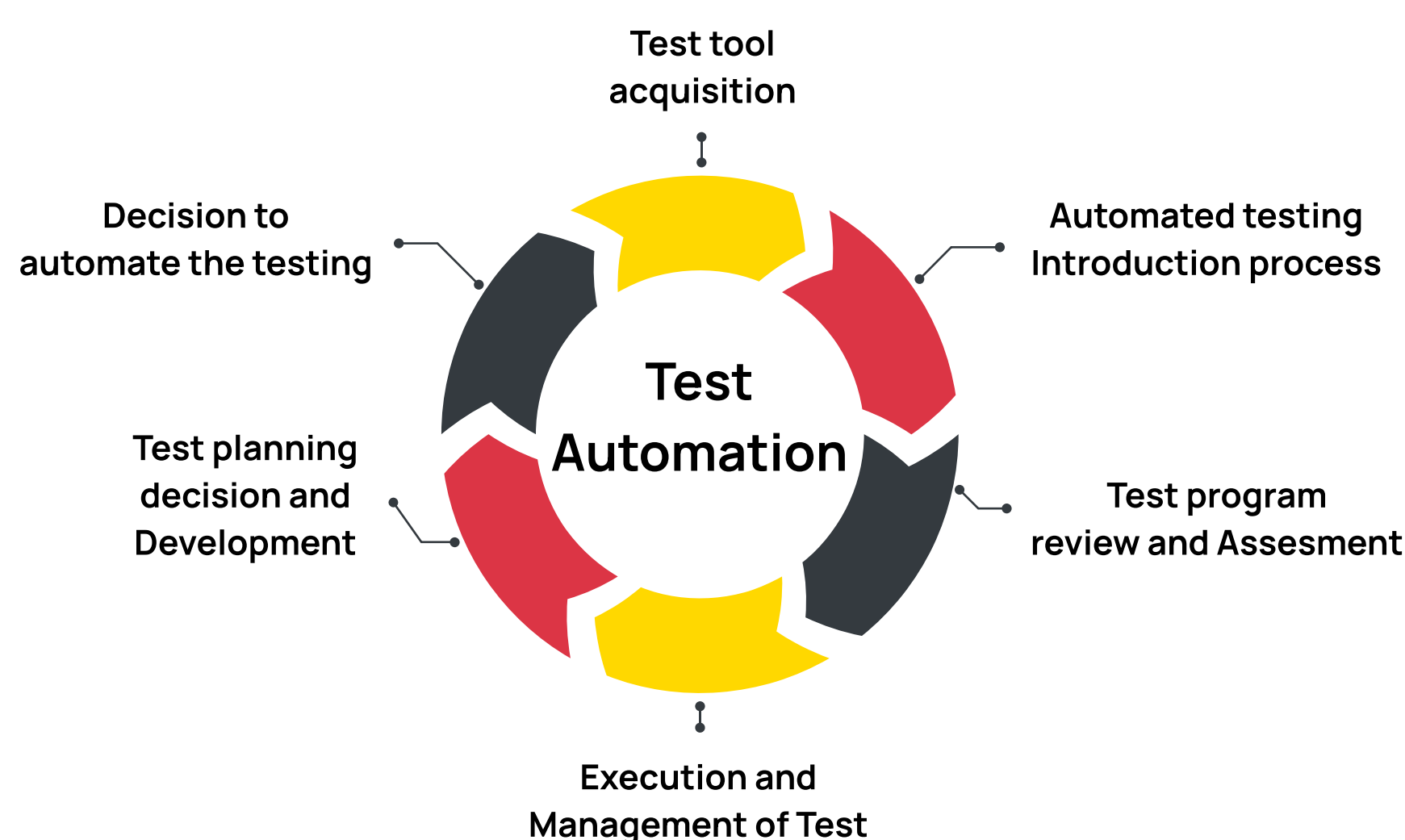
Trend 2. Focusing on user comfort

Functional testing has been leading the priorities of QA companies for quite a long time. It was believed that the correct processing of requests is the app's primary purpose, and therefore, less attention was paid to other characteristics. Now development and testing are done in a user-friendly way, i.e., the main focus is on: accessibility, security, performance, and stress resistance. All of these types belong to non-functional testing, and their task is to ensure maximum user comfort while working with an IT solution.

Customer focus will remain relevant in the next ten years because the success of both businesses and startups directly depends on the convenience of working with the app.



Trend 3: RPA in Testing



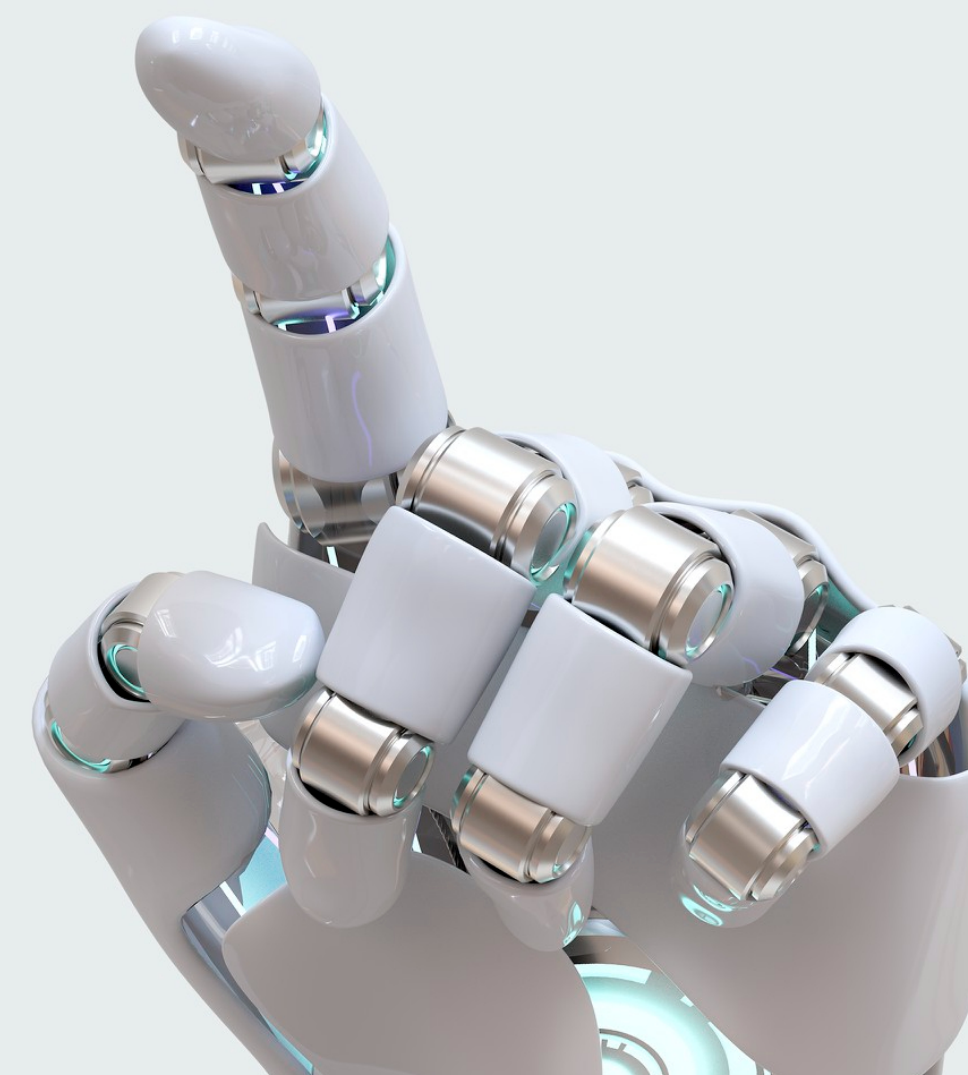
Robotic Process Automation is the next step into the world of full automation. In addition to routine processes, modern advanced technologies can be delegated to complex tasks, such as complex automation, up to creation of regression testing scenarios. In conjunction with AI, ML, and their potential, it will be possible to implement autonomous systems for a comprehensive study of IT solutions. The best indicator of global community engagement is market growth, which Statista predicts will be worth \$16 billion by 2030.

The trend for process robotization will be extended into 2023, 24, 25, and beyond. As long as there is potential for the development of methodologies and testing or development tools, the need to minimize the influence of the human factor will not disappear.

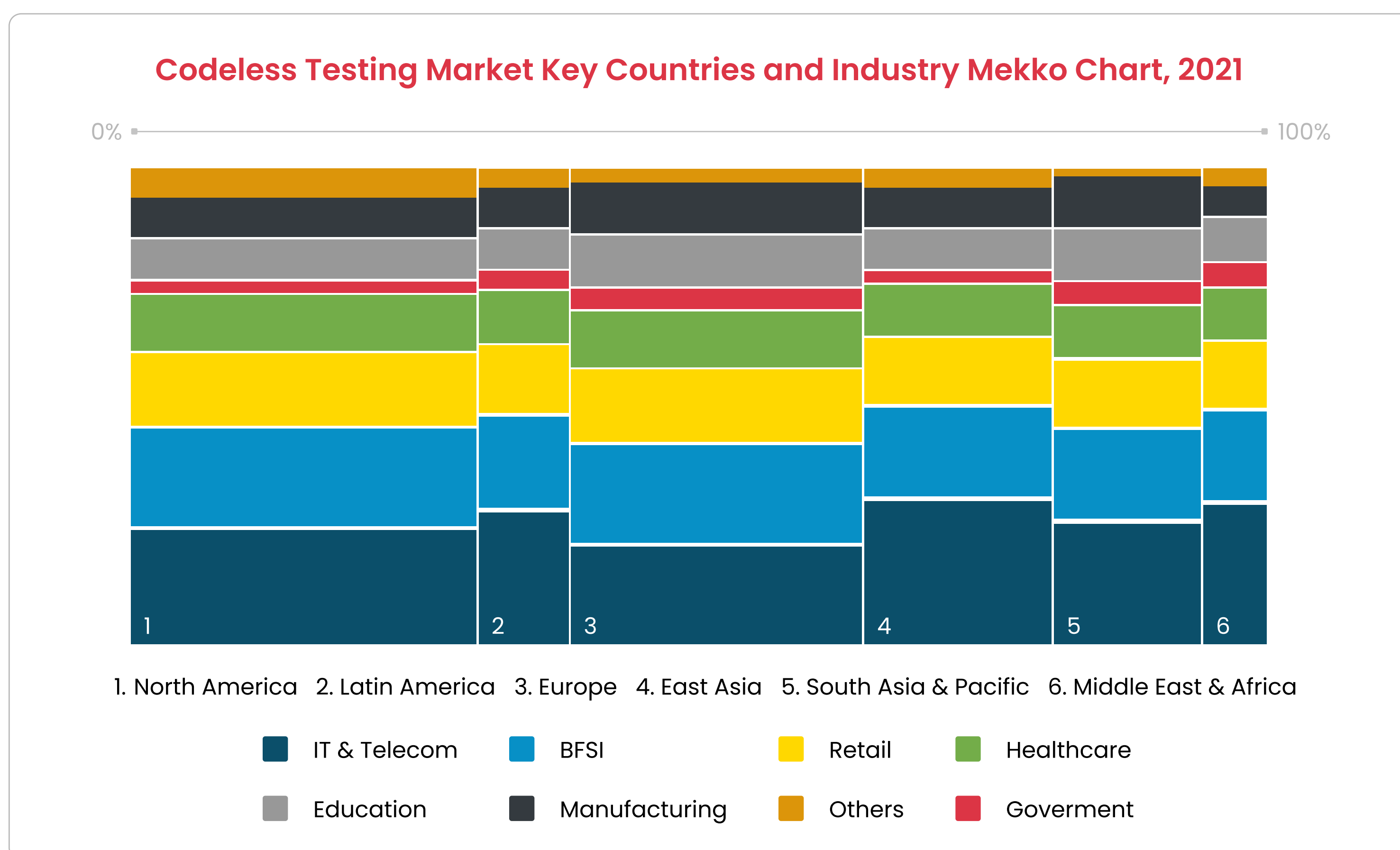
Trend 4. Hyper-automation of everything

If someone told you ten years ago that you could write a program that could independently check IT solutions for bugs, apply different techniques and adapt to the situation independently, would you believe it? Now the AI research course aims to complete the automation of everyday operations with subsequent adaptation to any conditions, analysis of Data Lakes, and the use of ML to solve any issues autonomously. This trend is not new because research has been going on for more than ten years, periodically delighting the community with progress.

Hyperautomation is now in its infancy, and the trend toward its development will continue until autonomous systems are developed.



Trend 5. Codeless testing



The complexity of modern QA mechanics lies in the high threshold for young talents to enter this area. It is due to the need for a thorough study of development languages and the need to use them when creating more or less effective automation scripts. Numerous tools, their syntax, and various conditions of use complicate the testing and require more resources and time.

An alternative approach would be codeless testing. According to [Future Market Insight](#), the demand for this format will grow by 15.5% until 2031. Its principle is interface or simplified scripting. As this trend develops, the threshold for entering the industry will decrease, and simultaneously, the testing quality will increase.

Summarizing

We can confidently say that the trends of 2022 for the automation and technology market, in general, will remain with us for the next five or even ten years. How soon fundamentally new solutions in QA services will appear depends on the speed of their development. This applies to services, processes, and general tools since future technologies will minimize the human factor while ensuring the proper quality of software solutions. Do you want to keep abreast of the latest developments in the IT universe? Take a look at our other blog posts.