Independent Testing Providers

vs. Software Houses:

Quick Guide to selecting a proper vendor

BONUS: Rates in Central and Eastern Europe

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1. Introduction

By 2029 the share of testing in terms of software development project will reach 40% from current 31%*. There is no question whether to test or not. The question is what provider to select and how.

The guide makes a dive into the independent QA and testing service market - the preconditions and ground of its emergence, trends and analysis.

The bonus enclosure is the ratecard for testing services in Central and Eastern Europe - one of the most financially attractive IT outsourcing destinations. Look through the guide to know the rates and plan your project expenses beforehand.

2. Software QA and testing services: Market Ecosystem

One of the most common reasons of software failure is discovering severe issues at the late stages of software development life cycle. This causes considerable expenses and falling behind the project schedule. According to IBM Systems Sciences Institute, to fix a bug detected after release requires 100 times more expenditures than the same issue found in the design phase.

*(*World Quality Report 2016 - 2017. 8 Edition)*

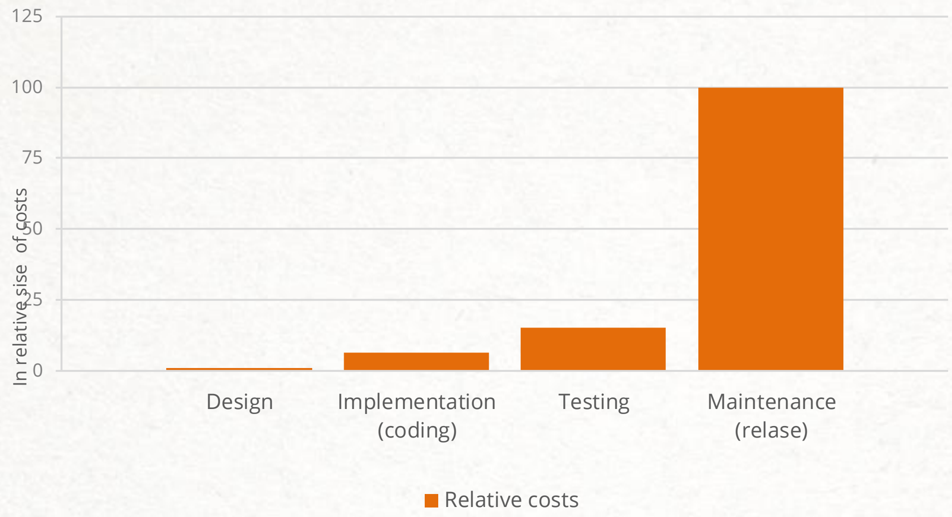


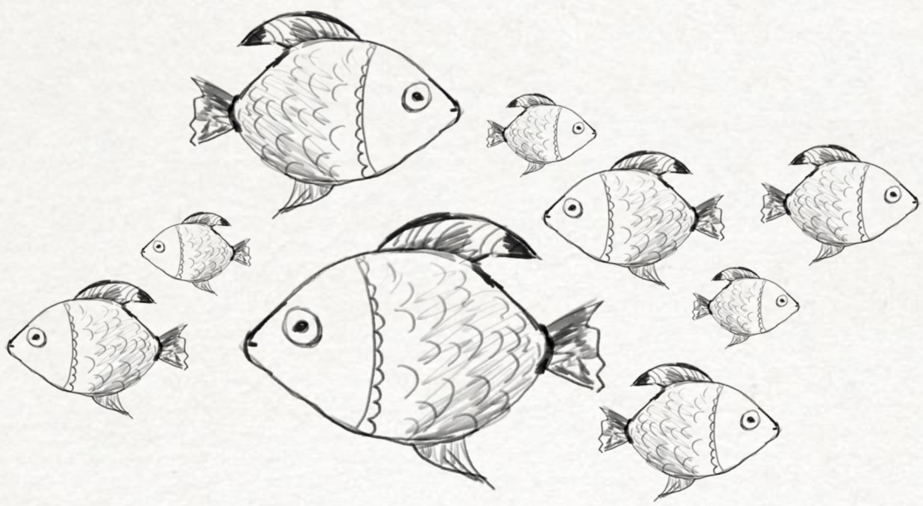
Figure.1 Relative costs to fix software defects

By phase/stage of the software development life cycle

Source: https://www.cbi.eu/market-information/outsourcing-itobpo/software-testing-services/

But at the same time, software testing remains the first budget item that can be reduced when company's spendings are limited. It's mainly only large and innovative businesses that realize the necessity of software QA and testing and implement managed testing by dedicated testing team, additional resources for main project team, one-off testing or even focus groups for beta testing.

Today software QA and testing market is represented by two types of providers: software houses and pure players.



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2.1 Software houses in QA and Testing

Software houses are the companies that primarily provide the services of custom software development and consulting. Such companies base their activities on in-house process model.

Providing testing services software houses run into the conflict of objectives. The financial model of software houses is focused on obtaining profit from software development, QA and testing is not their core competence. Despite declaring the complete independence of their internal QA services from development process, they fail to take customers' side by 100%. QA service of any software house is also oriented on the common business goal, which is to maximize profit from the core competence - software development.

Software houses invest in technological development and increase of internal testing teams considerably less than in programmers. Logically, they are interested to show as much "bug-free" code as possible, running a risk to "omit" some failures. And when bug-fixing requires more time and efforts than it was planned for testing, it is often not executed completely, while any pause causes schedule and budget variance. This results in loss of quality.

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Figure2. Magic Quadrant
Magic Quadrant for Application Testing Services, Worldwide

Source: Magic Quadrant for Application Testing Services, Worldwide, 2016. © 2016 Gartner, Inc. and/or its affiliates.

2.2 Pure Play Software Testing Services Market

Pure players are independent providers with software QA and testing being the core competence. They invest in specialists and infrastructure development to posses the up-to-date tools for testing. Usually, pure players' services cost is 15 - 20% less than the same ones provided by software houses in the frames of software development project.

Unlike software houses' internal QA services, independent providers / pure players are 100% focussed on quality of the software they test, while they are not bound by any constraints in research and finding failures. Pure players are definitely oriented on finding software failures: the more failures they find the better their work is work is performed. They protect software quality on the customer's side.

The pure play market is relatively young, therefore, today it offers only a few large global vendors, who are focused on providing services to large customers. The majority representatives are small and middle businesses that target either at limited locations or verticals.

Being young, the market is dynamically developing - according to "Global Pure Play Software Testing Services Market 2017 - 2021" report, the market is expected to reach USD 9.08 billion by 2021 and compound annual growth rate (CAGR) will increase by more than 19%.

Independent software QA and testing market grows faster than software development one. It testifies that software development customers becomes more aware of the value of independent testing, and that the considerable testing services share "migrates" to independent vendors from software houses.

There are some reasons for development of independent QA and testing market:

2.2.1 Preconditions of demand emergence

For sure, the growth of QA market share is predetermined by the growth of software development - the more software is developed, the more testing is required. One of the preconditions for it is the digitalizing. The growth of technologies requires more complex software and, thus, testing that takes bigger budget:

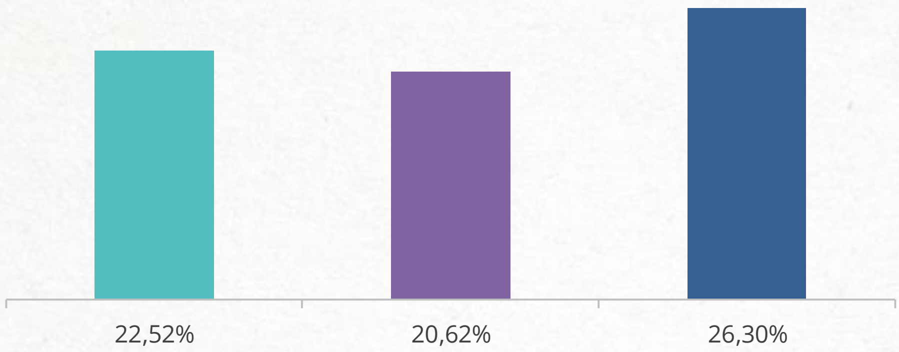

Figure3: 2016 Market Share
Global Pure Play Software Testing Services Market

Source: "Global Pure Play Software Testing Services Market 2017 - 2021", Technavio.

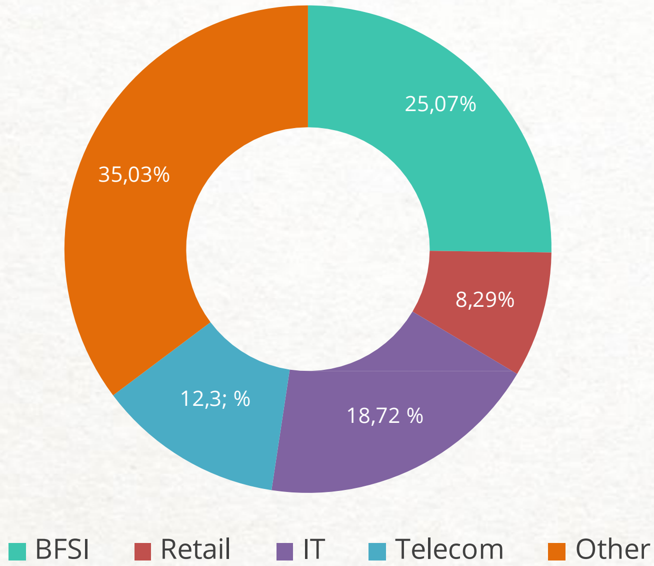

Figure 4: GAGR 2016-2021

Source: "Global Pure Play Software Testing Services Market 2017 - 2021", Technavio.

1. Banking, Financial Services and Insurance (BFSI) requires the development of multichannel interactions - ATM, Internet and mobile banking.
2. IT needs faster development procedure and product release.
3. Telecom becomes more agile and requires new tools for software development, e.g., DevOps.

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The Researches forecast the further growth of testing share in terms of software development budget.

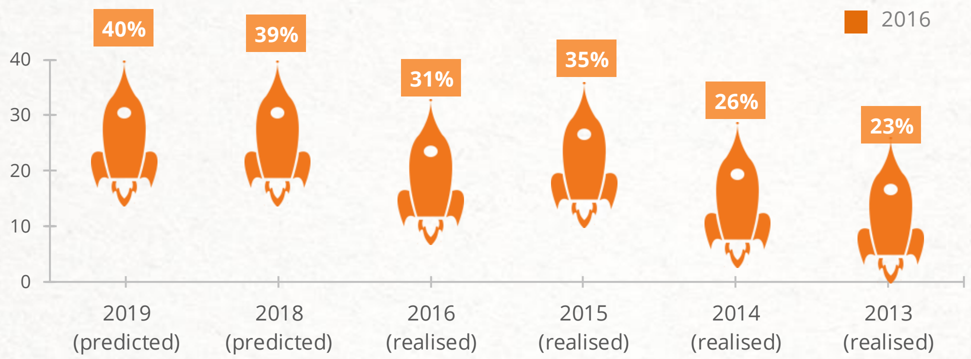

Figure 5: Budget allocation as percentage of IT spend

Source: World Quality Report 2016 - 2017

There is a doubt if software houses can cope with the increased demand in testing services.

2.2.2 Origin of providers

The QA and testing pure players were established on the ground of already old outsourcing software development market. The business model perfectly fitted the nature of services, all the more the majority of customers were software developing companies. For the moment, the majority of pure players are outsourcers.

Outsourcing of IT services provides a range of benefits: cost reduction, services provided by field experts and opportunity to focus on the core activity. Current offshore and nearshore outsourcing programs are designed to meet all the clients' requirements and international standards and ensure a high quality of outsourcing services.

The choice of proper provider depends on the range of different parameters and factors, including economical and political situation, tax systems and level of life. Companies from Europe are among current giants of outsourcing QA and testing market.

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Especially, Central and Eastern Europe (CEE) region shows the progress of QA outsourcing area and receives the inflow of foreign investments.

3. Reasons for companies to outsource software QA and testing

QA outsourcing services proved to be an efficient business model to reduce the operational costs and increasing company's profit. Current researches show, the countries from Central and Eastern Europe (CEE) are among the leaders of software QA and testing outsourcers.

Companies use the services of QA outsourcing because of several reasons. The main reason for outsourcing is to get services of a high quality.

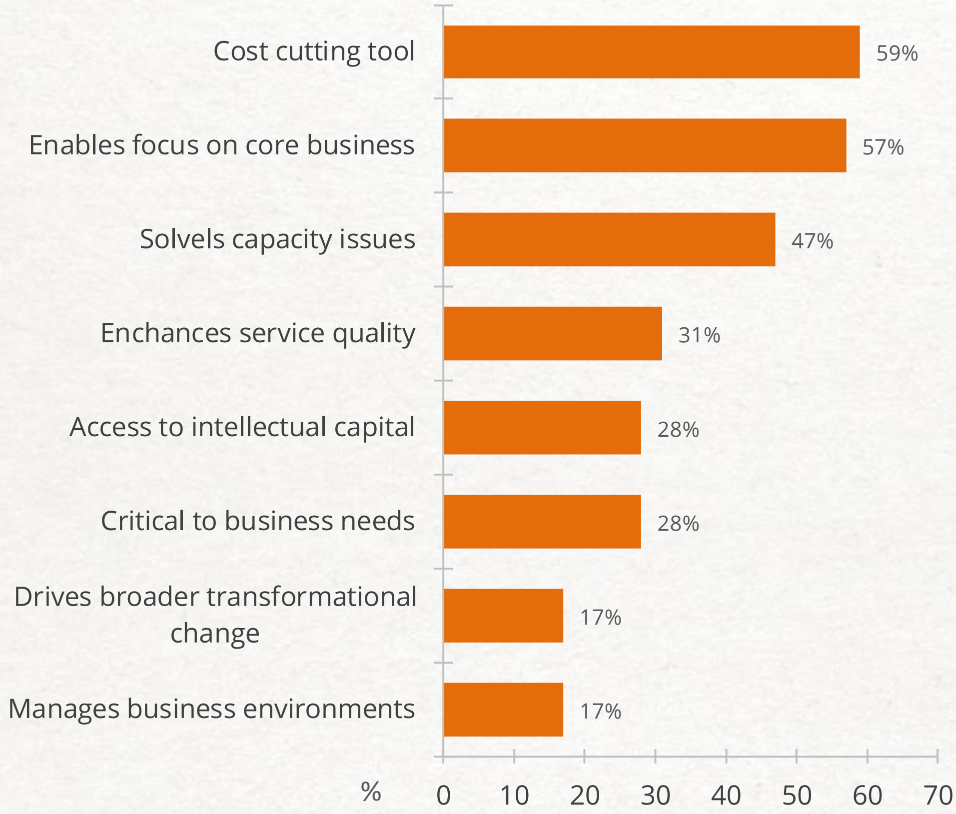

Figure 6: Reasons to outsource

Source: Leading drivers for using outsourcing services worldwide in 2016. www.statista.com

Testing outsourcing requires less expenses as a customer does not pay for office space, equipment, employees training and certification. A company does not bear expenses for taxation and pension payments. The customer pays only for man-hours needed to fulfill the assigned scope of work.

4. Why a Pure Play Software Testing Provider?

The choice of independent (pure play) testing provider is based on several parameters:

- experience in the field,
- testing team competence, including certificates,
- available testing resources,
- continuity of activity,
- flexibility and openness.

These aspects form the core attributes of independent testing service providers.

5. Why Central and Eastern Europe?

5.1 Team competence is the core

As stated pure players invest in development of the specialists' competence, often having own QA training centers.

The «Central and Eastern European QA Outsourcing Research» shows that the providers of the region can boast of high professional level of their teams.

Central and Eastern Europe has an extended set of educational institutions and schools. This reduces the necessity of potential investments in team management.

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Usually, software testers have a degree in software development or engineering that includes the courses in testing. They are aware of most common automation tools, test management tools and bug tracking tools. Technical skills also include knowledge of several programming languages, work with databases and different OS types.

Outsource QA providers monitor the level of competence of specialists. The majority of companies got international certificates.

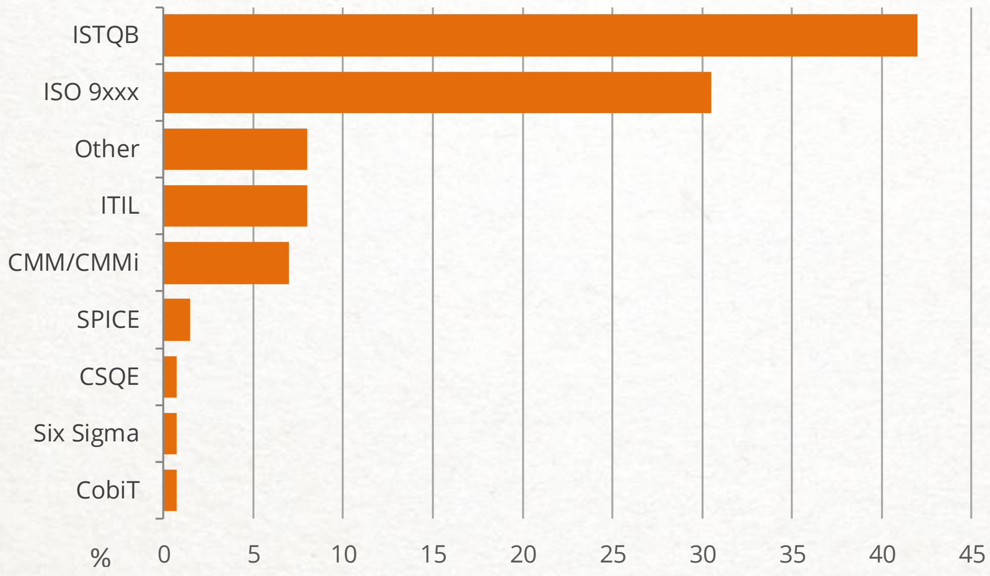

Figure 7: Share of companies certified to comply with international standards

Source: Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review

Despite technical background, software testers also possess analytical thinking, high communication skills and time/task planning abilities.

The development of outsourcing market leads to increased competition among service providers. This forces the improvement of the quality of services offered.

Companies strive to be proactive and ready for a quick start of a new project.

Besides companies from CEE region constantly invest in their employees' competency level.

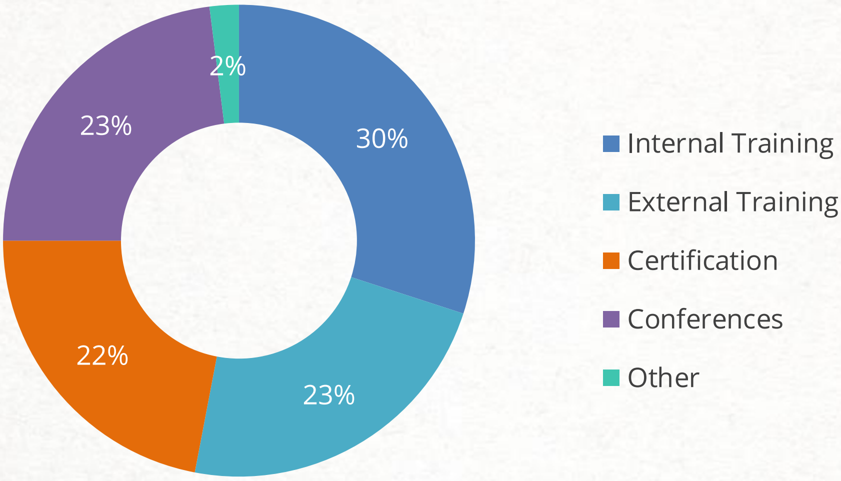

Figure 8: How do companies improve the competency level of testers

Source: Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review

The data show that the most common type of improvement of the competency level of testers is internal trainings. The share of this method in all types of methods in respondent companies is 30%. External trainings take 23%, as well as Conferences (23%). The Certification programs for testers are only on the 4th position with 22% of methods share.

5.2 Cultural Compatibility

The countries of the CEE region share common and similar to some extend traditions and values. This ensures the clear communication and smooth cooperation. The USA and Europe also have close business culture.

6. Rates for Software QA and testing outsourcing in Central and Eastern Europe

Each country in the CEE region is characterized by particular economic and political strategies, living standards, educational system, number of population and other factors. These factors predefine the development of IT sphere also.

The rates for QA outsourcing services is based on two core criteria: country and team (including its size and level of experience).

6.1 Rates by country

The chart represents the average rates for a standard QA team by country. The rates are indicated in USD.

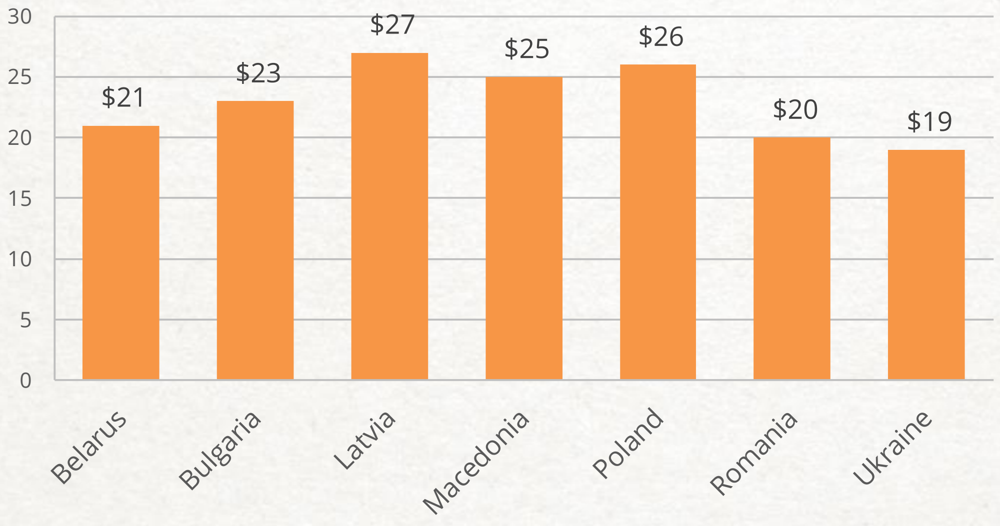

Figure 9: Chart Average rates for standard QA team by country

Source: Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review

The countries in the CEE region can be divided into two price segments: higher costs - Latvia, Poland and Macedonia, lower QA costs - Belarus, Romania, Bulgaria and Ukraine.

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Testing rates differ not only by country but also between different cities within one country. It's important to take the stated into account also while selecting the outsourcing QA service provider.

The CEE QA Outsourcing Report states the average rated both for software houses and independent QA and testing providers.

6.2 Rates by position

The rates for QA outsourcing depend on the technical background and experience in testing of all members of QA team. The rates for Junior, Middle and Senior QA Engineer differ between countries accordingly. Here is the chart hat provides the rates for all positions.

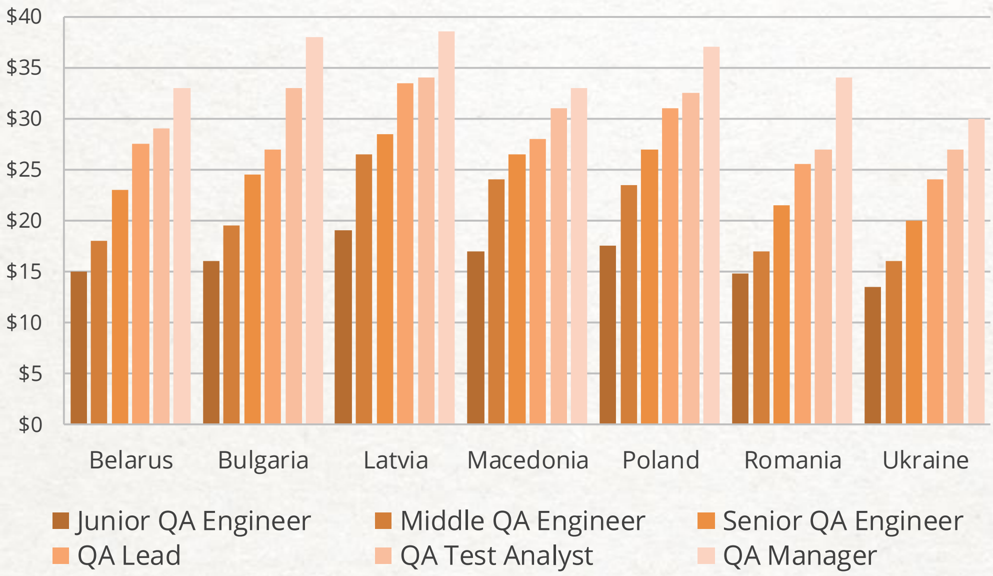

Figure 10: Average rates by country and position (man/hour), USD

Source: Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review

The average maximum and minimum rates for outsourcing QA by country and position are specified in the chart.

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Average maximum and minimum rates by country and position

Country	Position	min	max	Average	Average Rates by Country
Belarus	Junior QA Engineer	13	21	15,0	21
	Middle QA Engineer	16	27	18,8	
	Senior QA Engineer	20	35	23,8	
	QA Lead	24	40	28,0	
	QA Test Analyst	26	40	29,5	
	QA Manager	28	45	32,3	
Bulgaria	Junior QA Engineer	14	21	15,8	23
	Middle QA Engineer	18	25	19,8	
	Senior QA Engineer	22	33	24,8	
	QA Lead	25	35	27,5	
	QA Test Analyst	30	40	32,5	
	QA Manager	35	45	37,5	
Latvia	Junior QA Engineer	17	26	19,3	27
	Middle QA Engineer	25	32	26,8	
	Senior QA Engineer	27	35	29,0	
	QA Lead	30	41	32,8	
	QA Test Analyst	31	44	34,3	
	QA Manager	35	48	38,3	
Macedonia	Junior QA Engineer	15	27	18,0	25
	Middle QA Engineer	20	35	23,8	
	Senior QA Engineer	24	37	27,3	
	QA Lead	25	40	28,8	
	QA Test Analyst	28	40	31,0	
	QA Manager	30	42	33,0	
Poland	Junior QA Engineer	16	25	18,3	26
	Middle QA Engineer	21	32	23,8	
	Senior QA Engineer	25	35	27,5	
	QA Lead	28	40	31,0	
	QA Test Analyst	30	42	33,0	
	QA Manager	35	45	37,5	
Romania	Junior QA Engineer	13	19	14,5	20
	Middle QA Engineer	15	26	17,8	
	Senior QA Engineer	19	29	21,5	
	QA Lead	22	36	25,5	
	QA Test Analyst	25	37	28,0	
	QA Manager	32	42	34,5	
Ukraine	Junior QA Engineer	12	18	13,5	19
	Middle QA Engineer	14	24	16,5	
	Senior QA Engineer	18	27	20,3	
	QA Lead	22	31	24,3	
	QA Test Analyst	25	36	27,8	
	QA Manager	27	39	30,0	

Figure 11: Average maximum and minimum rates by country and position (man-hour), USD

Source: Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review

1. *Average rates were calculated using following formula:*
   20% rates Junior QA Engineer + 40% rates Middle QA Engineer + 20% rates Senior QA Engineer + 10% rates QA Lead + 5% QA Project Manager + 5% artes QA Test Analyst.

2. *Average rate for the position is determined as the arithmetic mean value provided by the respondents taking into account the size of the respondent company. The respondent with a larger number of employees is more significant.*

6.2.1 Conclusion

Technological development and digitalizing of different industries raised the importance of software QA and testing. That resulted into the increased demand of testing services and became the precondition number one for emergence of pure players - independent software QA and testing service providers. The pure players contrasted the software houses, whose business model included internal QA and testing services. Development and testing by one and the same vendor caused quality failures, while independent testing performed by pure players mitigated and eliminated them.

Today the market share of independent services providers in software QA and testing is growing faster than that of the software houses' one. It proves that the customer prefer pure players due to unbiased character of the services. Besides, the pure players' rates are 15 - 20% lower than in those of software houses. In terms of business model the origin of independent testing providers was given by traditional outsourcing software development companies. For the moment a number of pure players still position themselves as outsourcers.

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Central and Eastern Europe has been one of the most attractive destinations to outsource software development for a couple of decades, having strong education basis and comparatively low rates. It gave rise to a number of competent, professional software QA and testing companies, offering high-quality services at reasonable cost.

Contact Information

Office in Ukraine

Phone: +38 (044) 501-55-48

E-mail: contact@qa-testlab.com

Address: 154a, Borschagivska str., 03056, Kiev, Ukraine

Office in USA

Phone: +1 (862) 259-2435

E-mail: contact @qa-testlab.com

Address: 275 Route 10 East Building 220 Suite 346, Succasunna, New Jersey 07876 USA

Resources:

- Central and Eastern European QA Outsourcing Review 2016 - 2017. www.qalist.eu/ceeqa-outsourcing-review
- Magic Quadrant for Application Testing Services, Worldwide, 2016. © 2016 Gartner, Inc. and/or its affiliates. www.gartner.com
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