



Driving high performance and
cost effective solutions

Testadon Benefits and Return on Investment

5 Types of Testing in One Platform! *Never Code Again!*

Albia® Testadon



Introduction

Testadon is pioneering testing platform software developed by Albia® which incorporates User Interface, Functional, Load & Stress, System, and Integration testing and simulation for web enterprise systems. It is based on Test Execution and Modelling Platform (TEMP) - an innovative concept for a test platform researched and developed by Albia®. Testadon allows business users and developers to create test cases without writing a single line of code or script, and then to model test cases using GUI tools. This means that new test cases can be created within minutes, and existing test cases can be modified within seconds. Testadon allows real-time monitoring. It includes automated report generation, and it allows running unbeaten test cases for any web enterprise system. Testadon saves enormous amount of development and maintenance time, and has a great ROI. Testadon provides tools and features for effective Continuous Integration and Test Driven Methodology.

Software failures are expensive in today's high-tech world. Software bugs are costing billions to companies, and create economic instability across all business sectors, and especially in e-commerce and banking industry. Estimates of the economic costs of faulty software in the U.S. range in the tens of billions of dollars per year and have been estimated to represent approximately just less than 1 percent of the nation's gross domestic product (GDP)¹. Software bugs have a straight impact on system failure due to poor quality, poor performance, increase in software development costs, temporary system shut down, resulting in lost transactions, etc.



Purpose of Testadon

Testadon brings a complete platform where technical and non-technical users can create and execute tests. All processes have been optimized and automated, so that minimum human involvement is required for testing enterprise systems.

With Testadon you can simply plan, design, configure, run, acquire, measure, and evaluate without involving big testing team. Any activity that a tester needs to perform can be also done by a business analyst with Testadon. This is due to the fact that no programming or writing scripts is required for creating and executing complex enterprise system testing activities.

Testadon provides:

- ✓ *User Interface Testing*
- ✓ *Functional Testing*
- ✓ *Load & Stress Testing*
- ✓ *System Testing*
- ✓ *Integration Testing*

¹ The Economic Impacts of Inadequate Infrastructure for Software Testing, Final Report, May 2002, National Institute of Standards and Technology

ZERO Coding

Testadon is resolving most of the traditional testing platforms problems. It aims at allowing test cases to be generated without any scripting or programming, so that not only technical testers, but business analysts can leverage from creating test cases.

5 Types of Testing in ONE Platform

Testadon is designed to allow up to 5 types of different testing to be carried out on the same platform:

- ✓ User Interface Testing
- ✓ Functional Testing
- ✓ Load & Stress Testing
- ✓ System Testing
- ✓ Integration Testing

This allows for testing activities to be smoothly executed, providing an extensive and creative environment for designing and running test cases.

“In many software development organizations, the cost of testing can account for more than 40% of the total development cost for a software system”

Software Testing and the UML,
Center for Software Engineering,
IBM T. J. Watson Research
Center

Accelerate Testing

Testing process is accelerated, so that it takes minutes to write any complex test case, and then it takes seconds to perform any maintenance.

28% of defects are usually on interfaces. Testadon provides tools for testing User Interface as well as Integration testing, cutting the cost of

Cut the Costs

With Testadon you would be able to perform extensive testing with minimum budget. This is achieved with maximum automation of tedious tester’s activities, making it easy to carry out any testing project.

Complete Automation

Test cases for 5 levels of tests can be automated and scheduled, making your testing project well structured and easy managed. Using Testadon human effort is only used for design - the rest is performed by Testadon.

ROI

Testadon consists of innovations that will bring huge savings for any organization performing tests of enterprise systems. On average it takes at least 30% of time and effort to test any software development project. This can be cut up to 48% when using Testadon, and we will find out how.

The following table illustrates some estimates used to compare traditional testing methods with Testadon. The estimates are based on Albia® labs experiments with some

The average application spends approximately 40% of its lifecycle in the testing stage. Testadon can cut this time by up to 48%, while delivering robust testing framework that helps identifying problems rather sooner than later.

traditional testing tools (names are omitted since the intention here is to show effectiveness of Testadon and not the weakness of some brands). It is estimated that on average for one testing cycle teams usually have to create 10-12 test cases. Albia® labs experiments were carried out with 3 commercial and 2 open source testing tools with an intention to assess effectiveness of Testadon.

Test Procedure	Traditional Testing Tools	Testadon
Develop Test Strategy	10 hours	10 hours
Develop Test Plan	3 hours	3 hours
Design Test Cases (total of 10-12 test cases)	5 hours	1 hour
Set Test Procedures	4 hours	30 min
Assemble Test Scenarios	1 hour	10 min
Perform Test Case Tuning	1.5 hour	10 min
Develop Schedule Plan	5 min	1 min
Execute Test Cases	30 min	15 min
Create Test Log, Test Incident Report	5 min	30 sec
Gather Real-time Results, Real-time Statistics, Test Item Transmittal Report	- *	- *
Send Warnings, alerts - SMTP, FTP, and File Server	- *	- *
Generate Result Statistics, Custom Reports, Test Reports	5 min	1 min
Generate Reports: PDF, HTML, RTF, Result Statistics	5 min	1 min
Modify Existing Test Case	10 min	2 min
Total	25 hours 30 min	15 hours 10 min

*Results for these procedures are omitted since they are performed by the software automatically as a background process. However some commercial and open source testing tools don't offer this functionality at all.

Total Saving for All Testing Processes: 10 hours 10 minutes
Total Saved when using Testadon: 48% of time

Now, since testing usually accounts for 40% of all development time, Testadon can save 19.2% of overall development time. That means if the software development project cost on average is €250,000, **Testadon will save €48,000.**

Some might state that the cost of a tester and the cost of a developer are different, however in a typical commercial development organization, the cost of "debugging, testing, and verification activities can easily range from 50 to 75 percent of the total development cost" (Hailpern and Santhanam, 2002). Therefore Testadon is likely to save more overall time.

Very often software developers write big percentage of test cases (e.g. for regression testing). On average, 30% of all code in a software development project is unit testing used for regression and user interface testing. Most of

"debugging, testing, and verification activities can easily range from 50 to 75 percent of the total development cost."

Hailpern and Santhanam, 2002

that code would never have to be written because Testadon provides tools that allow creating test cases without writing scripts or programming. Testadon can be used by developers, testers, architects, and business analysts, because it requires no specialist technical skills for creating and running test cases.

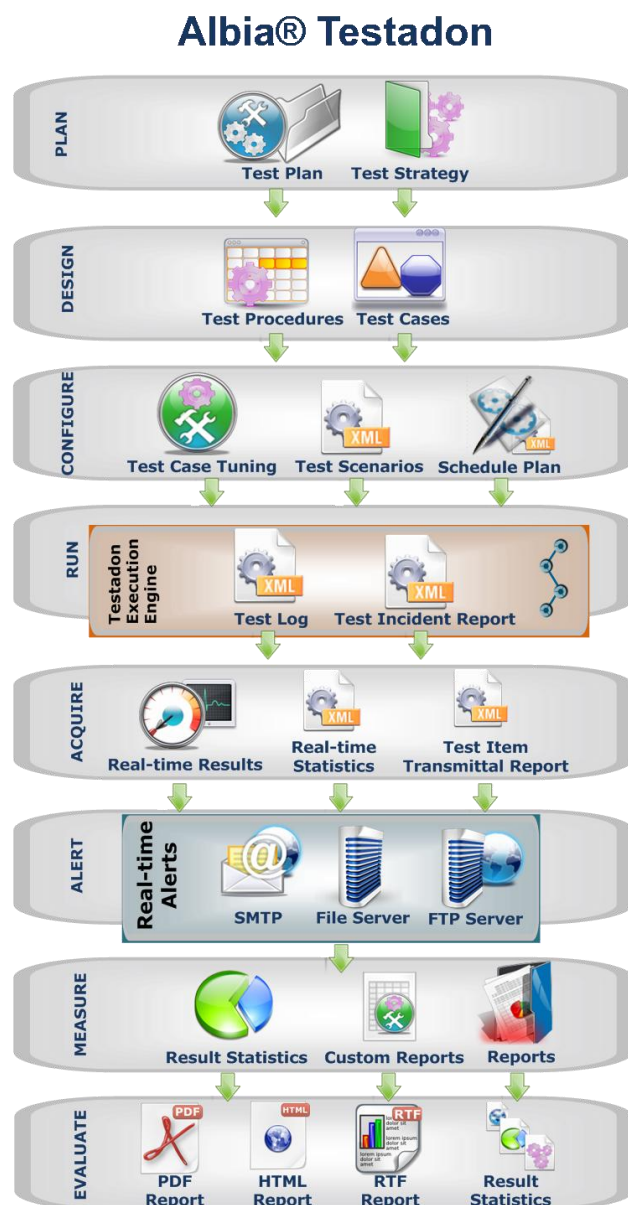
We can also consider tester daily rate calculations. On average the cost of a tester is around €436 per day². If a company employs a tester on a project that lasts 6 months, it comes out to around 120 days multiplied by €436, which makes it €52,320. Testadon saves 48% of testing time, which is € 25,113 if we transfer that into 6 months of testers' wages. On a project running for 12 months with 2 testers, **Testadon can save € 100,454**.

*Testadon can save
€100,454 annually*

Automated Test Case Report Generation

Testadon provides automated test case generation, which means every time any test case or suite is ran - Testadon will generate the final summary test case report, as well as any other reports defined within a test case. Test case reports are customizable. Every summary report contains explanation of the test case, execution results, charts, and diagrams. In an IT consulting industry this can be used as a final customer deliverable. Within any company using Testadon this provides a complete documentation tool for testing projects. Reports are available in PDF, HTML, and RTF formats.

Automated test case report generation in Testadon means that testers need to spend ZERO time on test case execution documentation. Testadon has built-in mechanisms that allow test case interpretation – each report generated for a particular test case contains short description explaining what that test case does, providing a visual test case model diagram (excluding load/stress testing). Within IT consulting firm environment it means that a consultant performing tests for a customer gets complete professionally formatted reports auto-generated, sparing him/her from doing this manually.



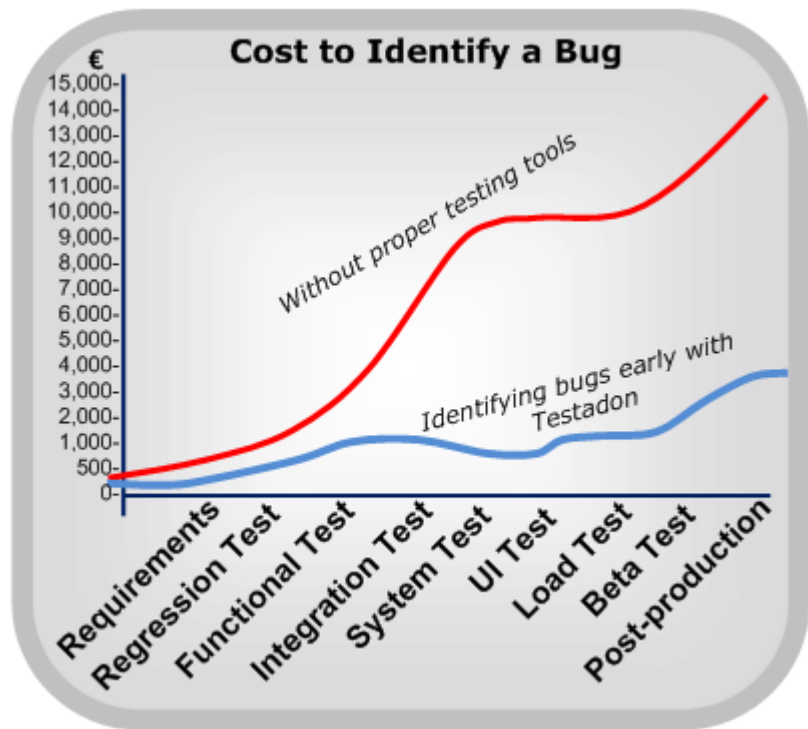
² www.itjobswatch.co.uk

This saves enormous amount of time, and spares testers from tedious and repetitive tasks – documenting test case execution results. Testadon automatically generates results, full statistics, charts, and diagrams, saving hours of un-necessary labour. This also ensures that all test runs are fully documented, which is not the case with many testing teams. To express this in numbers, if on average during test case execution phase it takes 5-10 minutes for creating a report documenting test case results, and if on average testers can run 10-200 test cases per day – **Testadon can save 1.5 to 33 hours of tester’s work.**

Testadon can save 1.5 to 33 hours of tester’s work

Early Problem Identification

By identifying problems during the requirements phase takes only about €150 to fix them. However during the development phase the cost of fixing bugs can be nearly €900 per bug. By the time the project gets into the hands of the quality assurance team, the cost for identifying and then fixing bugs goes up to almost €5,000 per bug. The further bugs are not identified during the project, the higher the cost, and during after the deployment phase the cost per bug can be up to €12,000. It is also worth mentioning that the number of bugs gets higher throughout the project lifecycle.



Testadon allows performing User Interface, Functional, Load & Stress, System, and Integration testing. Test case automation, alerts, and reporting mechanisms help identifying bugs at the early stage of a project.

By using Testadon from an early project stage it can help identifying bugs and thus saving more than 100 times less of costs per bug.

Maintainability is “the ease with which a software system or a component can be modified to correct faults, improve performance, or other attributes, or adapt to a changed environment”

The IEEE Standard Glossary of Software Engineering Terminology

Test Case Maintainability

It is a well known fact that a lot of time is usually dedicated on maintaining test cases. During development phase business requirements and technical specifications of the software can rapidly change (especially under Agile methodologies). Consequently test cases have to also be constantly adjusted to the ever-changing requirements.

Test case data also can sometimes change, usually causing maintenance nightmare. Testadon infrastructure for software testing allows for:

- identifying more bugs before the software product is released
- detecting bugs earlier in the software development process
- locating the source of bugs faster and with more precision

***Testadon maximizes profits
by helping to deliver high
quality software***

Testadon provides UI tools that make test case maintenance a quick and painless procedure, helping to save hours of effort and time.

Maximize Profits through Higher Software Quality

Many companies can increase their profits by delivering a higher quality of their software systems. This stands for not only software development companies, but many other industries who deliver services through software –e-commerce, online web services, vendors operating through electronic sale orders, banking, insurance, and many other industries. The general formula is:

$$\text{Profit} = \text{Revenue} - (\text{Testing} + \text{Production} + \text{Customer Service})$$

That means Testing plays a significant role on maximizing profits, since it requires investments into time and resources. However Customer Service is also impacted huge impact on the profit, and Testing has a direct impact on it. For example a company is delivering online services. If testing has not been properly done, and bugs start occurring when customers use the system, then the company will spend significantly more money on their customer service, while most of these problems could have been avoided if bugs were uncovered during the testing.

Testadon maximizes profits by helping to deliver high quality software.

Cut the Cost of Unidentified Bugs

The impact of unidentified bugs in software is huge, and companies are spending billions of Euros per year to cover the following problems which emerge out of unidentified bugs:

- System failure due to poor quality
- Poor performance
- High market transaction costs
- Increase in software development costs
- Lack of compliance to standards
- Non-conformance to SLAs (Service Level Agreements)
- Delay of transaction processing
- Temporary system shut down, resulting in lost transactions
- Increase in person-hours used for correcting posting errors

No company wants to get a reputation for software that is not robust and that has bugs which stop business operations. Testadon can speed up the process of identifying bugs across all stages of a project, providing automated testing tools with reporting and alerts. Testadon can be used for 5 types of testing (User Interface, Functional, Load & Stress, System, and Integration Testing), which provides a unique environment for creating, optimizing, running, and evaluating test cases.

Testadon can significantly drive down the costs of unidentified bugs by discovering them at the early stage of a project.

Conclusion

The potential cost reduction from feasible infrastructure improvements is \$22.2 billion. This represents about 0.6 and 0.2 percent of the U.S.'s \$10 trillion dollar GDP, respectively. Software developers accounted for about 40 percent of total impacts, and software users accounted for the about 60 percent³. Testadon provides innovative testing algorithms, metrics, alerts, test case modelling, and reporting tools that can help identifying bugs. Testadon can help to reduce the cost of testing and the time required to roll out new products. Testadon brings a unique infrastructure which supports real-time testing where testers can cure problems that appear right away rather than waiting until a product is fully released.

Testadon increases the net value of software by reducing the cost of software development and testing, decreasing the time required to develop new software products and services. It also improves performance, interoperability, and conformance of software.

- ✓ Testadon can save 19.2% of overall development time. That means if the software development project cost on average is €250,000, Testadon can save €48,000.
 - ✓ Testadon saves 48% of testing time, which is € 25,113 if we transfer that into 6 months of testers' wages. On a project running for 12 months with 2 testers, Testadon can save € 100,454.
 - ✓ Testadon provides automated test case executing summary reports generation. If on average during test case execution phase it takes 5-10 minutes for creating a report documenting test case results, and if on average testers can run 10-200 test cases per day – Testadon will save 1.5 to 33 hours of tester's work.
 - ✓ Testadon allows performing User Interface, Functional, Load & Stress, System, and Integration testing. Test case automation, alerts, and reporting mechanisms help identifying bugs at the early stage of a project.
 - ✓ By using Testadon from an early project stage it can help identifying bugs and thus saving more than 100 times less of money per bug.
 - ✓ Testadon provides UI tools that make test case maintenance a quick and painless procedure, helping to save hours of effort and time.
 - ✓ Testadon maximizes profits by helping to deliver high quality software.
- With Testadon:***
 - ✓ ***Save 19.2% of overall development time***
 - ✓ ***Save €48,000 on an average software project***
 - ✓ ***Save 48% of overall testing time***
 - ✓ ***Save €100,454 on a 12 months testing project***
 - ✓ ***Identify bugs early***
 - ✓ ***Maximize profits with high quality software***
 - ✓ ***Run 5 types of testing with one tool***

Testadon can significantly drive down the costs of unidentified bugs by discovering them at the early stage of a project.

³ The Economic Impacts of Inadequate Infrastructure for Software Testing, Final Report, May 2002, National Institute of Standards and Technology

24x7 Helpdesk

Albia® provides 24x7 Online Support, which includes assistance, access to our technical resources, help on all levels, and technical guide for all your queries.

- ✓ 24x7 Support
- ✓ Online assistance
- ✓ Dedicated technical engineers
- ✓ Professional Services support

Get in touch with our help desk today by logging at www.albia.biz

Training & Certification

Albia® provides industrial certification for Testadon that will help you to demonstrate your competency, dedication, and high standard of knowledge within software testing and Testadon.

- ✓ Testadon Associate
- ✓ Testadon Architect

Albia® conducts regular training courses, as well as on demand trainings at customer site.

Professional Services

Albia® Professional Services main mission is to ensure customer success, which is why we leverage business integration expertise to help our customers and partners become more self-sufficient in achieving, sustaining, and growing business results using Albia® solutions.

About Albia®

Albia® provides a broad range of business and technology services that deliver real business results.

Being an independent software vendor and IT services provider, we deliver innovative software platforms and integrated enterprise systems. By establishing long term partnerships, we work towards the success of our clients in Europe and the Middle East.

With headquarters in Sarajevo (Bosnia and Herzegovina) we cover many private and public sectors by bringing agile solutions delivered by top consultants with specially designed methodology. Our proven technologies and solutions help our customers to grow, be competitive, and get to the next level faster!

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