Problem Statement

"

Manual unit test case creation in software development is time-consuming and error-prone, leading to incomplete test coverage and lower code quality
Coordinating and maintaining tests across multiple developers adds further complexity and inefficiency to the process.
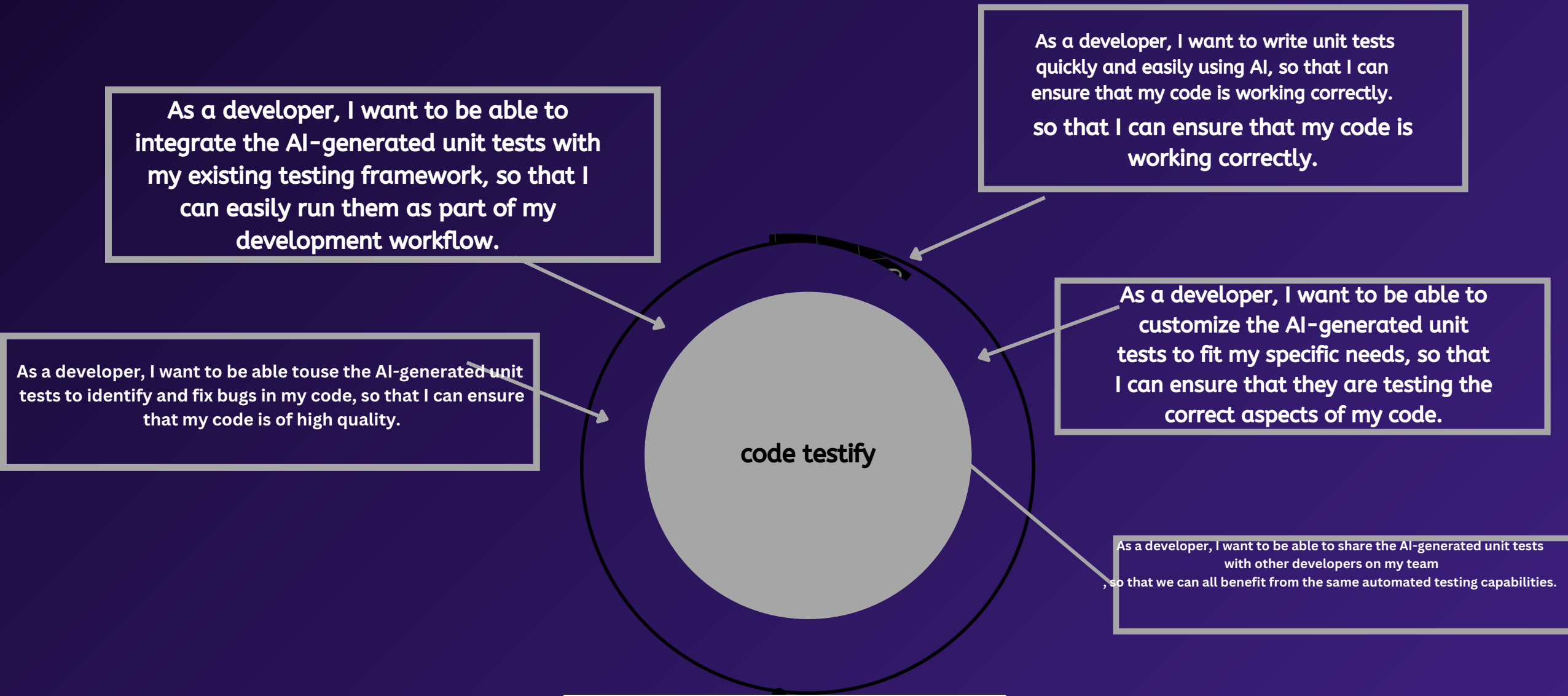There is a pressing need for an automated solution that can generate comprehensive unit tests efficiently, ensuring code reliability and streamlining the testing workflow for developers.

How Not <u>Writing</u> Tests Slows Down

- A survey conducted by GitLab found that developers spend approximately 20% of their time debugging and fixing issues that could have been prevented with proper testing.

- According to a report by CA Technologies, organizations that do not prioritize testing experience a 60% higher cost of quality compared to those that do.

- Studies have shown that the cost of fixing a defect increases exponentially as it progresses through the software development lifecycle, with fixes being up to 100 times more expensive in production than during the requirements phase.
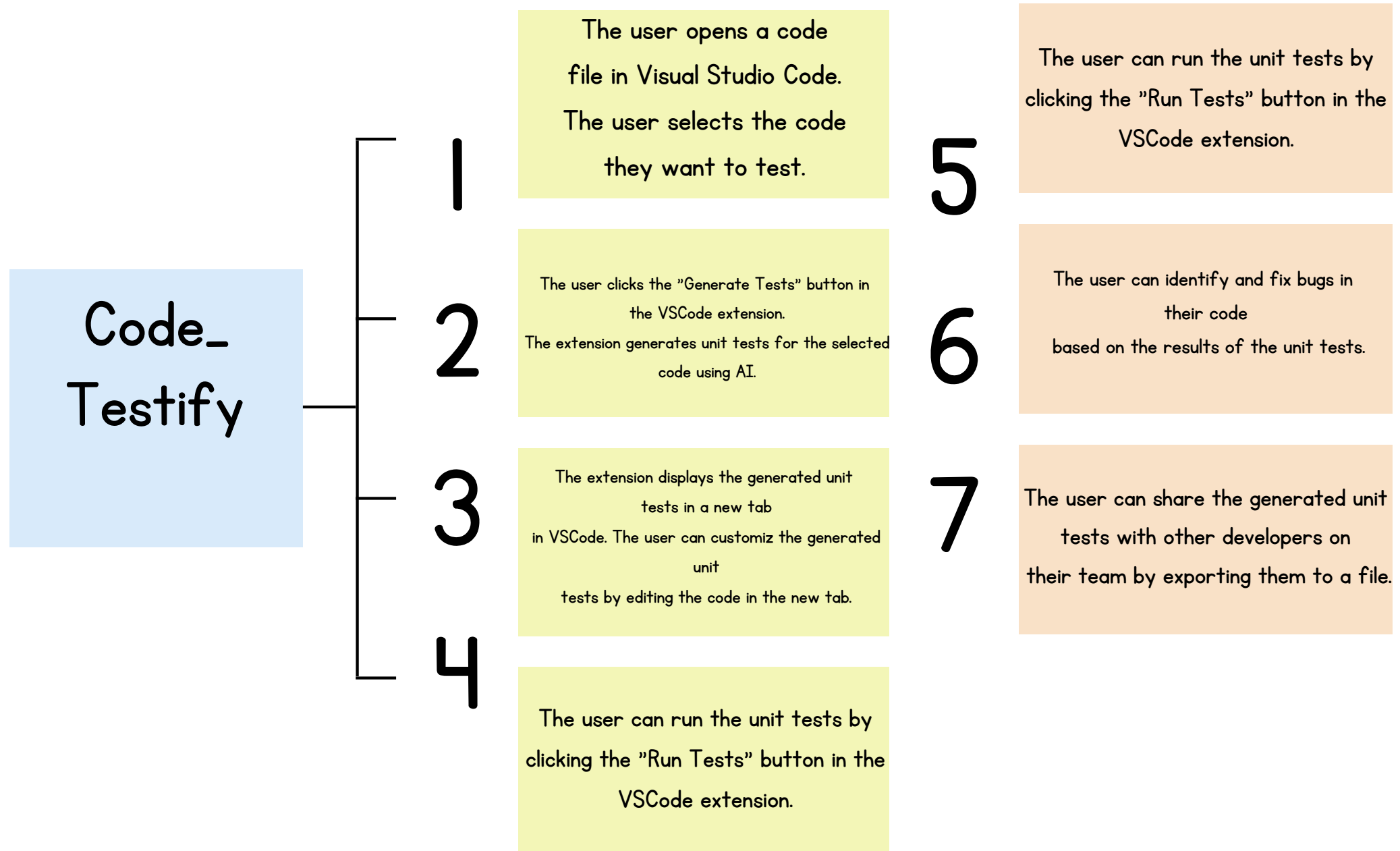
To solve this problem, we came up with a product idea

"Code Testify"

As a developer, I want to be able to integrate the AI-generated unit tests with my existing testing framework, so that I can easily run them as part of my development workflow.

As a developer, I want to write unit tests quickly and easily using AI, so that I can ensure that my code is working correctly.

so that I can ensure that my code is working correctly.

As a developer, I want to be able touse the AI-generated unit tests to identify and fix bugs in my code, so that I can ensure that my code is of high quality.

code testify

As a developer, I want to be able to customize the AI-generated unit tests to fit my specific needs, so that I can ensure that they are testing the correct aspects of my code.

As a developer, I want to be able to share the AI-generated unit tests with other developers on my team
, so that we can all benefit from the same automated testing capabilities.

And as a developer, I can do all of these things with the help of "Code Testify"

How It works?

Code_Testify

1 The user opens a code file in Visual Studio Code. The user selects the code they want to test.

2 The user clicks the "Generate Tests" button in the VSCode extension. The extension generates unit tests for the selected code using AI.

3 The extension displays the generated unit tests in a new tab in VSCode. The user can customiz the generated unit tests by editing the code in the new tab.

4 The user can run the unit tests by clicking the "Run Tests" button in the VSCode extension.

5 The user can run the unit tests by clicking the "Run Tests" button in the VSCode extension.

6 The user can identify and fix bugs in their code based on the results of the unit tests.

7 The user can share the generated unit tests with other developers on their team by exporting them to a file.

Business model/Future plans:

✓ Subscription-Based Model

✓ Enterprise Licensing

✓ Preemium Model

✓ Expansion into Related Markets
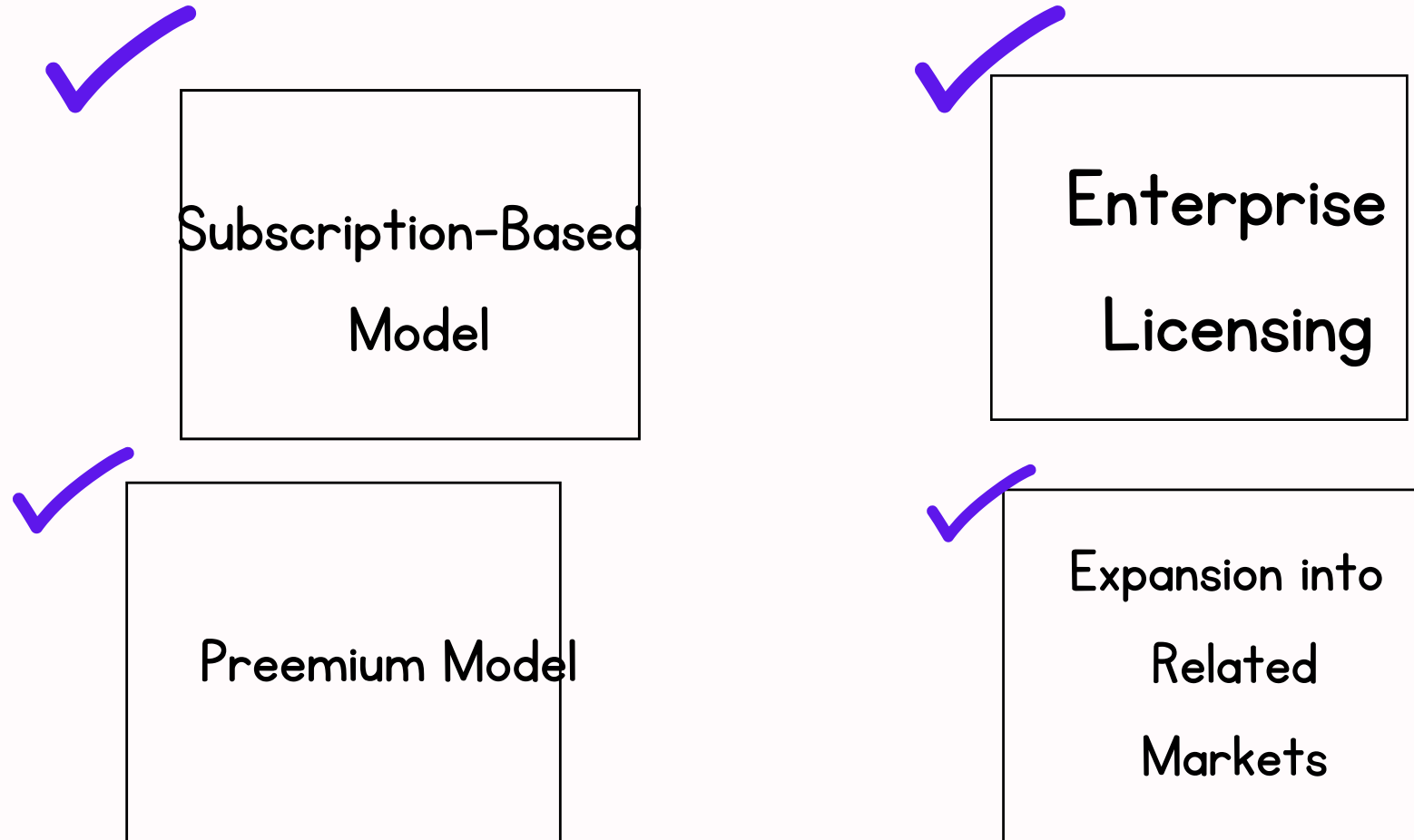
By implementing a combination of these strategies, Code Testify can establish itself as a leading
solution in the automated testing market while ensuring long-term success and sustainability.

Conclusion

Code Testify harnesses the power of AI to revolutionize unit testing. Here's how it stacks up:

Cost Reduction:
Automated testing can reduce testing time by up to 85% and improve defect detection rates by up to 90%, as shown by a study by Capers Jones.

Increased Productivity:
Companies that prioritize automated testing report higher customer satisfaction rates and reduced time to market for new features and products.

Quality Improvement:
Automated testing tools like AutoTestGen can significantly enhance code reliability, leading to fewer failures and higher-quality software.

Thank you!