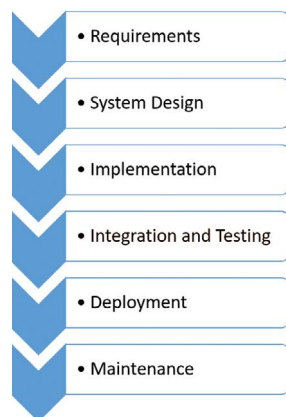


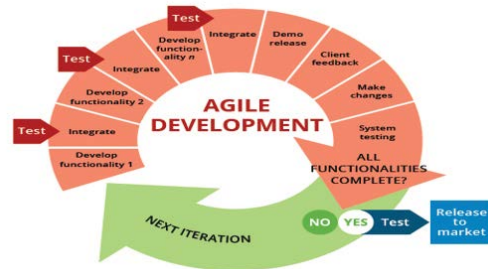
RCR Technology Testing As A Service (TaaS)

■ What is TaaS?

RCR Technology has created a testing-as-a-service (TaaS) capability that includes a wide variety of best practices currently used by many of our leading client's for their application and product development projects. We believe in proactive quality management versus a reactive quality approach. This results in increased client satisfaction and value to their customers end users. In today's fast-paces world of software development it is critical to build robust software that can be development rapidly with high quality of performance.



We follow proven methodology and approaches that fit both traditional waterfall software development, and also support agile or hybrid models. Our testing team understands the relationship between a successful software implementation and testing of those components or systems.

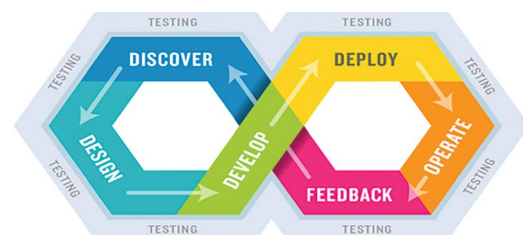


In a traditional SDLC, we follow the Rational Unified Process. To keep up the ever-changing demand, many organization and clients are moving toward Agile development. Continuous Integration and Continuous Deployment (CI/CD) and DevOps approach.

Our approach of shift left, testing is conducted throughout the development process. We emphasis an approach of repeatable, and continuous testing with a goal for defect prevention rather than defect detection.

RCR Technology has extensive experience in supporting those methodologies and in automation testing.

Our vast client-based project experience in testing approaches include: Standard Waterfall, Agile, and DevOps.

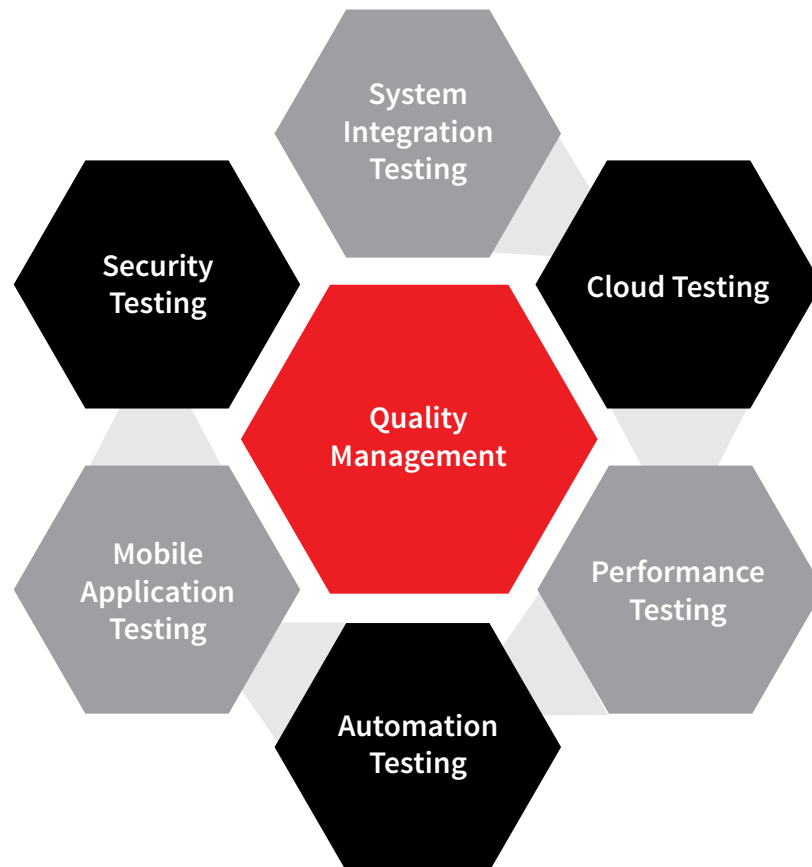


The more efficient and proactive the testing, the more successful the product is for our customers and helps them reduce the cost of their application development efforts. We minimize test cycle time using automation in CI/CD pipeline testing early and often and in parallel test execution. The result is a higher build quality, reduced risk and waste in SDLC.

■ *Why We Are Unique?*

- Cost effective services
- Our ability to help to gain better customer trust, satisfaction and speed up development efforts by identifying defects early in the software development life cycle
- ASTQB certified and experienced quality analysts, certified Agile and project management professionals
- Proactive management and proven processes and methodologies
- Experience and expertise providing these services for many years to many clients
- Leadership in managing the User Acceptance Testing (UAT), Release Management and other stakeholders
- Providing statistical dashboards on testing progress daily to management
- Expertise in risk assessment and creating mitigation strategies

■ *Our Services*



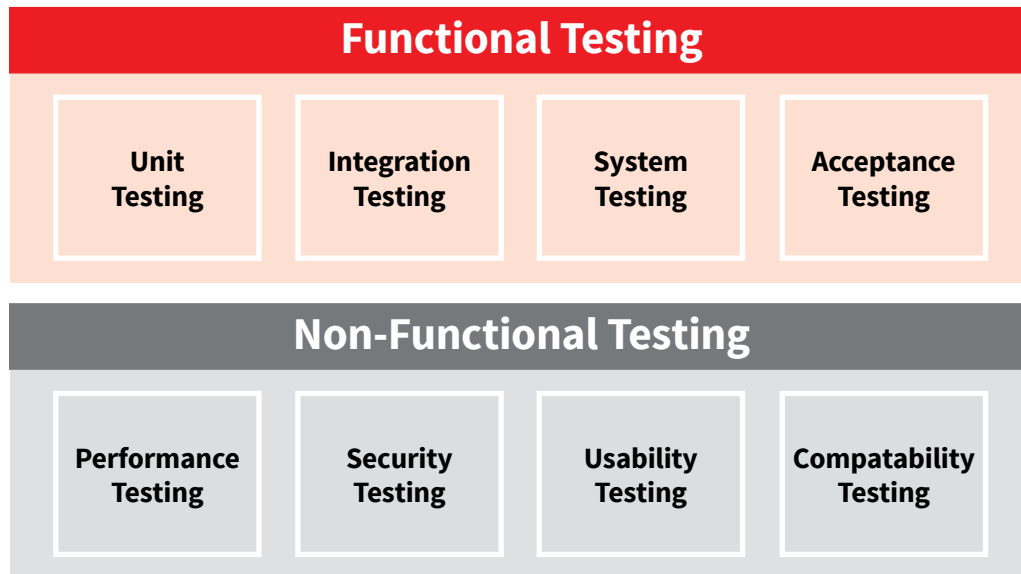
System Integration Testing	System testing of software changes and end to end testing of overall system with emphasis on the functional requirements including traceability to the requirements. This service includes UI, regression, system integration, and user acceptance testing (UAT)
Performance Testing	<p>Performance and scalability testing to access the potential impact of architecture, major functionalities, system enhancements and hardware/software constraints. Performance testing mimic the real-world user environments and scenarios by simulating virtual users and workload for performance/stress/load test scenarios to identify potential impact to the system and client's SLA requirements.</p> <p>Type of testing: Performance, Load, Stress, Scalability and Volume</p> <p>Benefits: Support in meeting SLA to customers, verify scalability, stability with increase in load and performance with increase in data volumes, detect bottlenecks before roll out to production, can correctly estimate hardware capacity and estimate performance under different workloads.</p>
Automation Testing	Automated testing is a method of software testing we use to run critical scenarios on a repeatable schedule.
Security Testing	<p>Security testing scans the applications and websites to identify any vulnerability and threats. RCR has employed a comprehensive security testing program which includes but not limited to:</p> <ul style="list-style-type: none"> • Security and threat analysis • Vulnerability assessment & Scanning • Exploitation and in-depth penetration testing • Conformance to requirements and compliance testing • Functional security testing to extend test beyond tool capabilities • Monitoring & reporting • Experience with methodologies cited by MARS-E v2 and IRS Publication 1075
Mobile Testing	Mobile testing includes testing of various mobile devices used by your software for functionality, usability, and consistency
Cloud Testing	Testing of web applications in cloud computing environments to simulate real-world user traffic. Flexible test execution and test assets to achieve a fast return of investments, deliver product in quicker time, reduce operational, maintenance costs, and investments

Quality and Project Management

- Management of project quality by meeting or exceeding customers need and expectations
- We believe in prevention over inspection and strive for continuous improvement
- Improve project quality using PDCA (Plan, Do, Check and Act) model
- Stakeholder management and coordination during UAT, production release and post production support
- Define, measure quality targets and reporting

■ **Methodology**

The methodology and approach align into two different types testing services – functional and non-functional testing.



■ **Functional Testing**

Our services includes unit testing, integration, system, and user acceptance testing. Our testing includes manual testing of specific functions, execution of automation scripts for repeatable regression testing and selected process. For automation testing, we use 4-step **(RICE)** approach:

- **R**quirements - Learn the business and functional components requirements for their software or product
- **I**dentify a set of end to end scenarios in collaboration with customers and stakeholders
- **C**reate scripts to ensure connectivity with the various components of the system and scenarios to cover business requirements
- **E**xecute the scenarios and document the results

■ **Non-Functional Testing**

Our services that includes performance (load/stress/scalability), security testing, usability and compatibility testing

Some of the high-level activities are carried out as follows:

- Conform to all federal and state requirements and masking production data if production data is required to test critical functionality
- Ensure no PII (Personally Identifiable Information) or PHI (Protected Health Information) data is vulnerable to release

- Create, update, and execute automated testing scripts prior to promoting a build to the next level of testing. This will begin during unit testing, continue when moving to system testing, and through user acceptance testing. Additional manual smoke testing will be completed for areas that we do not include in the automated testing scripts
- Defects will be written for any issues found during the build process for building a repository of lessons learned for packaging and deployment of builds. Include lessons learned plans to prevent the reoccurrence of those issues and implementation of plans
- Ensure deliverables are completed prior to the code moving to the testing level:
- In the rare instance when scenarios cannot be passed, we get approval from our partners to move to the next testing phase
- Any defect that is identified as a prod level defect will be documented and have a mitigation plan. There will be no severity 1 or 2 defects in unresolved state. Severity 3 defects will have a documented work around
- Develop automation scripts to assist with unit test and build verifications. Prior to code moving to the next level of testing, our automation team runs scripts to confirm the build is ready to be elevated to the next level
- Document all exit criteria along with scope items that are identified in release, requirement approvals, number of test cases executed in both system test and UAT defects logged during testing

Capabilities:

- Expertise leading end-to-end testing including multiple clients, vendors, and stakeholders to foster collaboration among teams to achieve a common goal to deliver to a pre-determined timeline
- Experience and proven leadership in creating testing strategy, test plans, coordinating and conducting system testing, user acceptance test (UAT) reviews with various stakeholders
- Conducting defect management meetings, review of exit criteria for a release during our Go/No-Go meetings
- Breadth of our testing services include testing business functionality, security testing, boundary testing, repeatable regression testing, batch interface testing, real-time testing, conversion testing, mobile app, and testing of cloud applications
- Our staffing approach to recruits and retain the best talent available. Our test analysts that work on internal or client's project hold average of 10 years of testing experience
- Bi-lingual testing services
- Experience with a variety of tools including automation, performance testing and security testing tools
- Our testing staff are ASTQB/ISQTB certified, security certified such as Security+, CISSP, CISA, and CISM
- Extensive background in defect analysis, tracking, prioritization based on severity of defects and provide resolution
- 20 + years' experience working with state and local governments

■ Key Projects

RCR has provided testing and quality services for many clients over our 20+ year history.

Some of the key projects include:

Client	# of Years	# of QA Resources	Key Metrics
FSSA/DFR - State of Indiana	13	30	<ul style="list-style-type: none"> • 13 + years of quality developmental services and support for FACTS that included: <ul style="list-style-type: none"> • 108 Maintenance Releases • 212 - General Enhancement Implementations - • 98 - Perfective Maintenance Releases • 372 - Change Requests Implementations • Systems and components supported: <ul style="list-style-type: none"> • Service Center/work-flow management system with statewide implementation (92 counties) and more than 3000 end users • Document Management or Processing System (DPS) • IVR/Telephony, Outbound Dialer Application • Self Service External Benefit Portal – statewide end users • Agency Portal • Captiva & PDF Center • Case Review Tool (CRT) • Methodology used – Waterfall, Agile, DevOps • Key benefits: <ul style="list-style-type: none"> • Faster development time • Less development cost due to use of automation scripts for regression testing • Reduced defects • Less errors found during user acceptance testing • More uptime for end users
State of Indiana-FSSA/OMPP	5	8	<ul style="list-style-type: none"> • More than 5 years of quality services during implementation and migration of IMPACT, GTW systems • Testing of application components and micro-services • Methodology used – Waterfall, Agile, DevOps • Key benefits: <ul style="list-style-type: none"> • Faster development time • Less cost for development due to use of automation scripts for regression testing • Reduced costs due to defects found earlier in the testing process • Less errors found during user acceptance testing • More uptime for end users

Client	# of Years	# of QA Resources	Key Metrics
Indiana Pension System	4	6	<ul style="list-style-type: none"> • Systems and components supported: <ul style="list-style-type: none"> • Case management system with statewide implementation (92 counties) • Interface with multiple State and Federal agencies • Methodology used – Waterfall • Key benefits: <ul style="list-style-type: none"> • Unit testing conducted by the development team resulting in fewer defects • More quality code delivered to the user acceptance testing team due to errors found during system testing • More collaboration between partners and the development team • More uptime for end users
Indiana Support Enforcement Tracking System (ISETS)	6	8	<ul style="list-style-type: none"> • Systems and components supported: <ul style="list-style-type: none"> • Case management system with statewide implementation (92 counties) • Interface with multiple State and Federal agencies • Methodology used – Waterfall • Key benefits: <ul style="list-style-type: none"> • Unit testing conducted by the development team resulting in fewer defects • More quality code delivered to the user acceptance testing team due to errors found during system testing • More collaboration between partners and the development team • More uptime for end users
Anthem	4	5	Methodology used – Waterfall
IEDSS - State of Indiana	4	10	Methodology used – Waterfall
ICES- State of Indiana	20	5	Methodology used – Waterfall
BHAS™	4	3	<ul style="list-style-type: none"> • More than 5 years of quality and support services for multiple states - Washington, New Hampshire, Virginia • Quality management for Product Development • System integration, scalability, and security testing • Methodology used – Waterfall, Agile • Key benefits: <ul style="list-style-type: none"> • Fewer defects resulted in getting new functionality out to end users significantly faster thus allowing for more effective interactions with caseworkers and their patients • Reduced cost of development projects by approximately 15% • Reduced time to execute changes by almost 20% • More efficient use of client’s project team; more on development ideas and less on reviewing results of testing and identified error reports

■ **Tools and Technologies**

- IBM Rational Performance Tester
- Rational Load Runner
- Automation tools – such as Selenium, SoapUI, IBM RFT, Cucumber, HPE unified testing,
- Eclipse, STS, Protractor, Jenkins, Postman, Rest API Interface, and API automation tools
- OWASP ZAP, Burp suite penetration testing tool
- Microsoft Office (Excel, Word, PowerPoint)
- Defect Tracking tools – Jira, Jazz
- Collaboration software – Microsoft Teams

■ **Our Clients**

A few examples of our many clients:

