

UK mobile: +44 07519 120370

North America cell: +01-647-274-2595

fiona.charles@quality-intelligence.com www.quality-intelligence.com

Professional Profile

I teach organizations to match their software testing to their business risks and opportunities.



A consultant since 1994, I have extensive experience designing, implementing and managing practical and effective testing and test management processes, working with some of Canada's largest companies as well as an emergency services system vendor to the UK government.

My project audit experience has proven invaluable in the test capability assessments now central to my consulting practice. My test management and consulting has included training and coaching testers on large and small projects for clients across the business spectrum.

Prior to founding Quality Intelligence Inc. in 2007, I was a test manager and consultant on strategic client projects for IBM Global Services and LGS Group. I began my career in software product development, acquiring a solid foundation in excellent software development, testing and release management practices.

My track record includes turnarounds of ineffective or stalled testing efforts. I coach individual testers and teams one-on-one. I also perform program-level test management on complex multi-project programs.

I am passionate about inspired, collaborative testing and test management on software projects of all sizes—Agile or more traditionally managed. I advocate, design, implement, and teach pragmatic and humane practices for on-time, on-budget delivery of software that delights its stakeholders.

I teach and present at international conferences and am co-founder and host of the Toronto Workshop on Software Testing, an annual peer conference for test practitioners. My blogs and articles on the human side of software development appear frequently online and in leading software journals and I edited *The Gift of Time* (Dorset House, 2008).

Consulting Services

- Project and vendor assessment
- Testing and Test Management:
 - Capability assessment
 - Process design and implementation
- Test Strategies for enterprises and projects
- Rescuing testing projects
- Designing and facilitating custom workshops and classes

Test Management Services

- Program Test Management
- Management of Large-Scale (Enterprise) Systems Integration Tests
- Test management on difficult projects

Training, Coaching and Mentoring

- Agile test coaching
- Quality coaching for large projects/programs
- Collaborative testing and test leadership
- Risk-based Test Strategy design
- Pre-designed and exploratory testing
- Defect and problem management

Skills and Expertise

- Communication and presentation to all levels in an organization
- Rapid assessment of project and testing risks, roadblocks and process issues
- Expert project and test problem solving
- Design of cost-effective test and quality strategies
- Building and leading high-performance teams
- Workshop facilitation

Business Domain Experience

- Retail and Distribution
- Emergency Services (Ambulance, Fire)
- Banking and Financial Services
- Private and Public Sector Insurance
- ❖ Telecom
- ❖ Health Care
- Manufacturing
- Energy
- Library Automation
- Professional Sports Labour Union
- Software Product Development

November 2016 Page 1 of 16



Employment History

2007 - present Quality Intelligence Inc. - Owner and Principal Consultant

Toronto, Canada and London, U.K.

In 2007, I launched my own company: Quality Intelligence, offering consulting on testing and test management, as well as test management in difficult circumstances, including rescues of failed or stalled test efforts and program-level test project management on large-scale multi-project programs. I also offer experiential training workshops in project skills "Beyond Process" for clients and at international conferences.

In my most delivery recent project, I turned around the test effort on a large insurance system, developing a robust test strategy and implementing practical, cost-effective processes, while building and managing a focused and effective team. I ended by transitioning the test management to a permanent client employee, leaving her well-equipped to manage the testing on this and subsequent projects.

I have since conducted two software test capability consulting engagements and two coaching engagements.

2003 - 2007 **IBM Global Services** Markham, Ontario

At IBM, as consultant and program test manager on challenging projects, I played a key role in the successful delivery of quality systems meeting IBM clients' strategic objectives.

1994 - 2002 **LGS Group** Toronto, Ontario

At this medium-sized Canadian consultancy, I had excellent opportunities to lead in a variety of roles, both line management and consulting/managing on client projects. In December 1999, LGS invited me to establish and manage the Testing Services Practice for the Toronto Branch. In this role, my achievements included definition and delivery of testing services, design and implementation of LGS test processes, oversight of LGS test delivery and test personnel on client projects, and management and mentoring of branch testing resources.

1984 - 1994 **PROMIS Systems Corporation**Toronto, Ontario

I acquired a solid foundation in the delivery of quality software throughout the SDLC at PROMIS, a small, innovative software product company whose leading-edge MES was installed at many industry leaders in the semiconductor industry including Motorola, Siemens, Texas Instruments, and Samsung. In my final four years, I was manager and then director of Quality Assurance, reporting to the CEO and acting as acceptor for all PROMIS software products, user documentation, customer training and technical support. I spearheaded the company's drive for demonstrable compliance with FDA standards and ISO-9000.

| 1982 - 1984 | I.P Sharp Associates Toronto, Ontario |
|-------------|---------------------------------------|
| 1978 - 1982 | UTLAS International Toronto, Ontario |

November 2016 Page 2 of 16



Project History

Sep 2016

Agile Testing Coach, Agile Transformation

Quality Intelligence Macquarrie Bank, Sydney, Australia

Consulting

Filling in for a colleague who was unavailable to start when needed, I joined a team of Agile coaches from UST Global to do the foundation work with testers for the bank's ambitious transition to Agile. Almost all of the testers were new to Agile, and most had no

Banking

understanding of how their roles and everyday work would change in the new world. I worked with them to define their roles and teach them how they would transition from waterfall project testers to proactive quality advocates, joining with product owners and developers to refine stories and develop acceptance test scenarios, identifying what needed to be tested for each story and feature, designing automated tests, and working with other project team members to ensure that all the required testing would be done within each two-week sprint. I also worked with the team responsible for test automation leadership to develop quidelines and a practical strategy for incrementally replacing the bank's GUI-level

Nov 2015 to Jan

Consultant, QA Capability Assessment

2016

Athabasca University, Athabasca, AB

Quality Intelligence

Following my work with the ASRP project test team, Athabasca University's IT department selected me through an open RFP process to conduct an assessment of their QA capability

Consulting

to support approved projects in their ITS Strategic Plan.

test scripts with lighter-weight and more robust API-level scripts.

Postsecondary Education The assessment focused on both testing and quality assurance, and examined the QA unit's capability in terms of leadership, staffing and organisation; skills and training needs in project test leadership and risk management, as well as hands-on testing; practices, processes and deliverables; and tools and environments. In addition to the QA unit itself, the review covered surrounding systems and processes which affect QA capability, including management support, quality assurance throughout IT, AU's technical systems and applications environment, and relevant procurement processes.

November 2016 Page 3 of 16



Project History

April 2015 to Dec 2015 QA Consultant and Coach, ASRP Project

Quality Intelligence Athabasca University, Athabasca, AB

Consulting

Athabasca University was upgrading the Student module (formerly stand-alone) in its Banner ERP system and then integrating Student with the HR and Finance modules in its overall Banner implementation. A combined team of experienced testers and business users was responsible for testing the upgrade, which included a mix of vanilla, custom and customized forms.

Postsecondary Education

The project QA Lead planned to implement exploratory testing within a Session-Based Testing (SBT) management framework across the University's IT group, and was piloting these methods on ASRP. Both exploratory testing and SBT were new to most of the University's testers, as they were to the available contractor pool, and following Michael Bolton's presentation of the Rapid Software Testing course to the testers, I was engaged to consult with and coach the QA Lead and team to put these methods into practice. I also consulted with the test lead on another high-profile project, where implementing exploratory testing and combining it with traditional methods where needed presented a more complex challenge for the team. The goal was to ensure that the teams' combined experiences with successful exploratory testing would be the groundwork for widespread use across IT, resulting in faster, more responsive and more effective testing that significantly benefits the University's IT projects.

December 2014 to March 2015 Consultant, QA and Test Practice Review, Public Safety Delivery

Ontario Health Services Cluster, Toronto and Kingston, Ont.

Quality Intelligence – Integritas

Consulting

Within the Ministry of Health and Long-Term Care (MOHLTC) Health Services I&IT Cluster, the Public Safety Delivery (PSD) group is responsible for the mission critical technology and IT systems that enable the dispatching of land ambulances throughout Ontario. These are primarily COTS systems, which PSD acquires and integrates, then implements and supports at 21 Central Ambulance Communications Centres across the province. Rapid, accurate action and response are essential at all steps in the process. A system failure, slowdown or error could cause lost time that results in a patient's death or critical harm. The integrated systems that the Ambulance Communications Officers depend on must therefore be reliable, easily useable, and free from defects that could pose significant risks to patients.

Public Safety

PSD performs extensive testing to mitigate the software and infrastructure product risks, and they will soon be facing significant new technology challenges. I was engaged to consult on enhancing their testing and quality assurance capability and capacity. I conducted a formal assessment, and then worked with the newly appointed test leader on planning for, and initial implementation of, the assessment recommendations.

November 2016 Page 4 of 16



Project History

September 2012 to December 2013

(PBA-I)
Medavie Blue Cross, Moncton, New Brunswick

Quality Intelligence – PQA

(Consulting/ Delivery) Following significant quality issues with the port of a large and complex administration and claims insurance application from VB6 to Java by an Indian outsourcing company, Medavie sought my consulting help to "fix the testing" on the next project (PBA-I), whose objective is to address a subset of the requirements gaps and take the administration functions of the system live for the first time. On conclusion of the initial consulting contract, the client asked me to stay on and manage the testing.

Program Test Manager, ACP Program Private Business Administration Project I

Insurance

After an initial evaluation, I moved immediately with the test leads to define and assign essential and meaningful work, implementing a lightweight documentation policy to ensure cost-effective test deliverables that added optimal value to the project. I then worked with them and the project construction leads to evaluate the risks and develop a robust Test Strategy, covering all phases of the project from system test of the customized new application and modified legacy systems, through final end-to-end system integration testing of the solution into the enterprise. I eventually grew the test team to 20 testers, test automators and leads, and managed them across 7 workstreams, implementing sound test practices to find important bugs and help manage the risk of going live for the first time with this lifeblood application. Ultimately, Medavie management asked me to transition this critical test manager role to a permanent employee: their corporate test manager, who will manage completion of the testing on this and subsequent projects in the ongoing ACP program.

My final consulting deliverables were a Test Strategy for the next project—PBA-II—and a structure and strategy for ACP program test management.

October 2012

Experiential Workshop Trainer and Facilitator

Quality Intelligence (training) Professional Quality Assurance (PQA), Fredericton, New Brunswick

Test Consulting PQA hired me to conduct 2 days of workshops at their head office in Fredericton. The first day consisted of 2 half-day experiential sessions with senior testers and leads, including *Identifying Stakeholders for Testing* and a career workshop. On the second day, I facilitated a corporate strategy workshop with the company's senior executives.

July to August 2012 Consultant, Proposal for Testing Infrastructure Migration Project

Quality Intelligence (consulting) Professional Quality Assurance (PQA), Fredericton, New Brunswick

Test Consulting A major client in Vancouver requested a proposal from PQA for testing the migration of its lifeblood applications from the current Unix platform to IBM. I worked with the proposal team to help them assemble the bid, developing and recommending a high-level risk-based strategy for testing the migration, discussing the strategy with the client's project manager to assess receptiveness, writing portions of the proposal and supplying graphic materials.

November 2016 Page 5 of 16



Project History

April to May 2012

Consultant, End-to-end UAT of Business Processes for Day 1 of Business Merger

Avaya, Basking Ridge, New Jersey

Quality
Intelligence
(consulting)

In this role, I provided my expertise in large-scale end-to-end testing to assist the Business and IT leads with setting up for and executing a business process test in a very tight timeframe for the merger of a new acquisition.

Telecom

March 2012

Experiential Workshop Trainer Husky Energy, Calgary, Alberta

Quality Intelligence (training)

I conducted two experiential workshops with mixed groups of IT personnel at Husky: *Delivering Difficult Messages* (half-day) and *Determining Business Risks for Testing* (full-day).

Oil and Gas

March to December 2010 Programme Test Manager, FiReControl (UK)

Cassidian (formerly EADS Defence Systems), Newport, Wales

Quality Intelligence (Delivery) As Programme Test Manager working for the integrator, I was responsible for all testing prior to UAT on this Critical National Infrastructure project. I was the 6th person in this role, inheriting a dispirited and under-staffed team, an atmosphere of mistrust with the Communities and Local Government client and a contractual commitment to deliver on an impractical, onerous, and yet inadequate Master Test Plan. I quickly moved to rebuild and redirect the team. I redefined the Test Strategy to remove impossible tasks and add large-scale disaster scenario tests to address major in-service risks. With an ultimate team of 80 testers, test managers and leads, I managed 7 workstreams, including assurance of testing by 14 international suppliers, detailed infrastructure and interface testing, and preparation for functional, availability and performance/load systems integration testing.

Public Safety

FiReControl was intended to implement a fully networked and coordinated system for the Fire and Rescue Services throughout England, consisting of 53 integrated components (primarily applications) covering everything from receipt of an emergency call via the 999 intelligent network; mobilisation of the appropriate personnel, equipment and appliances; provision to firefighters via mobile data terminal of data required to get to the scene and deal with the emergency; recording of incident data; closeout of the incident and secure storage of all records. Under the overall management of UK Communities and Local Government, Cassidian was the system provider and integrator. The project was cancelled by the government in late December, 2010.

March 2010

Consultant

Quality
Intelligence
(Consulting)

IBM Global Business Solutions, Toronto, Ontario

At IBM's request, I performed an assessment of IBM's test approach and processes on a challenging client project employing a large team of global testers, some sited offshore and some working at the client's project site in Greater Toronto. I recommended a reduced-documentation approach incorporating exploratory testing, to improve test coverage and capability and radically increase the team's chances of achieving the client's very aggressive end date.

Telecom

November 2016 Page 6 of 16



Project History

February 2010

Testing Coach and Consultant

Quality

VisionMAX Solutions, Inc., Mississauga, Ont.

Intelligence (Consulting)

This rapidly growing company wanted expert advice on their testing capability, but were moving too quickly to pause for an assessment or a standard consulting engagement. Instead, I proposed on-the-ground practical coaching with the testers. I sat with each tester through a work day, asking questions and suggesting pragmatic alternatives for

recommendations and others that required management action, which I presented in an

improvements. The final deliverable was a consulting report consolidating those

interactive session with the test team and the Chief Operating Officer.

Telecom

October to November 2009 Editor

Software Test & Performance Magazine

Quality Intelligence (Editing)

I was guest editor for the January 2010 special issue, with the theme "Influential Women in Software Testing". Working to a tight deadline, I managed the project: solicited articles from nine authors on three continents, including five testing bloggers whose work had never before appeared in print; subsequently worked with each author to prepare the articles for handover to the final publication editor; wrote and finalized the editorial.

October to November 2008 Consultant

Odyssey Financial Technologies, Toronto, Ontario

Quality Intelligence (Consulting) This international software company develops products for the financial services industry and customizes them for each client's unique requirements, primarily using configuration but also customizing code. The Toronto delivery group needed help with a major bank client, which was demanding unreasonable evidence of testing and deliverables that were not in the contract and not budgeted. My initial mandate was to act in the client-facing senior testing/QA role short term, and to advise the delivery vice president on project risks. It was immediately apparent that testing was only one facet of the problem, and my principal deliverable included testing but focused primarily on findings and recommendations about project management and delivery management issues and risks. As well as recommending a going-forward strategy and practical tactics, I worked with the delivery project managers to define test deliverables and reporting that would satisfy their major bank clients and still fit within the software company's nimble delivery process. Finally, I coached the project managers on assessing the business risks of a software implementation.

Financial Services

December 2007 to April 2008

Test Manager - Cardiac Wait-times

Cancer Care Ontario, Toronto

Quality Intelligence (Delivery)

I joined this project just after the start of test execution, and continued through User Acceptance Test and Production Acceptance Test, to Go-Live. The project had a troubled history, with confused requirements, many change requests, and the failure of the first developed version to achieve end-user acceptance from the client organization's own very challenging client. As test manager I was responsible for ensuring a rigorous test process and practice commensurate with the risks of a partly clinical application. An equally important element of my role was to help the project management team identify, manage, and resolve user acceptance issues with potential to threaten Go-Live for a second time.

Health Care

November 2016 Page 7 of 16



Project History

October 2007

Consultant - Test capability assessment

Forzani Group, Calgary, Alberta

Quality
Intelligence
(Consulting)

I evaluated the capabilities and practices of the 11-person QA team against the real ongoing business risks of the client's software projects. I recommended a paradigm shift in their test approach, moving to risk-based testing, and made several other practical recommendations for improving the test practices and growing the capabilities of the QA team. I subsequently worked with the QA team and Manager to implement risk-based testing practices, and coached and mentored the QA Manager on the new approach.

Retail

The engagement included evaluating the test strategy for a major infrastructure upgrade project. I worked with the QA Manager and project Lead Tester to change their strategy from a costly total regression test to targeted testing following technical verification oriented to the upgrade technical risks—which I taught them how to identify. With the revised approach, the client achieved substantial savings of both money and time, including a reduction in business risk over the originally proposed strategy.

January to July 2007

Program Test Manager, IT and End-to-End Test Prime - iPTV

Bell Canada-Bell XpressVu, Toronto, Ontario

Quality Intelligence (Delivery)

(This was a resumption of the program suspended by Bell in August 2005.) In this role, I was program test manager responsible for oversight of all IT testing on the iPTV program: standards, coverage, effectiveness, completion.

Telecom

I also managed the planning and preparation of a large-scale systems integration test to mitigate the client's IT risk with the launch of this strategic new product offering. The IT solution consisted of many legacy systems from multiple lines of business, which had been integrated or partially integrated with new systems, a vendor iPTV product, and each other. The end-to-end test covered the principal business flows, including order capture through activation of the video stream on the customer's TV set-top box, equipment inventory tracking, billable TV and data stream events, and billing/financials.

I designed the strategy and processes, staffed, trained and led the team in preparing the test, then transitioned to a client test manager to manage test execution.

September 2006 to January 2007

Test Manager - Point of Sale Implementation

Shoppers Drug Mart (Shoppers Home Health Care), Toronto, Ontario

IBM Global Services (Delivery) I managed test planning and preparation for an end-to-end acceptance test to verify the financial accuracy of a heavily customized POS system, with minimal documentation and no access to the vendor's development team. I designed the test strategy to be scalable for both the Home Health Care standalone implementation and the proposed subsequent Shoppers Drug Mart implementation which would be integrated with multiple store and corporate systems. I staffed and managed the team developing scenario-based tests assembled from building-block transactions, then transitioned to a more junior test manager for test execution.

Retail

November 2016 Page 8 of 16



Project History

May 2006 to September 2006 Test Consultant - THINK project Trillium Hospital, Mississauga, Ontario

IBM Global Services (Consulting) I was sole consultant on a transformation of the client's processes and systems, moving from provider-centred to patient-centred care. The multi-year initiative was primarily to implement new systems in place of manual processes, and to replace a monolithic legacy clinical system with a suite of integrated best-of-breed systems from a variety of vendors. I conducted a Test Assessment, which identified a need for increased testing rigour to address the risks of new software to patient safety and corporate liability. I worked with the program management team to convince clinical management of the need to implement the assessment recommendations, including additional skilled testing resources. I then helped hire new people. I designed a new test process and toolkit, tailored to match the client's "buy don't build" practice, and with a core strategy of Risk-Based Testing and due diligence documentation. Finally, I coached the test coordinators and project managers and assisted with rollout of the new process throughout the program.

Health Care

September 2005 to February 2006

Program Test Manager - TECP Project (Truncation and Electronic Cheque Presentment)

Intria Items, Mississauga, Ontario

IBM Global Services (Delivery)

As Test Manager, I was responsible for User Acceptance Test, Operability Test and Performance Test on a complex suite of combined applications and hardware for the electronic cheque imaging project. I managed the client's test teams, and directed the selection and implementation of a new bug tracking system. I represented the customer on the Canadian Payment Association's Inter-FI Test Working Group, which was responsible for planning and coordinating the eventual integration test across all financial institutions.

Financial Services

December 2004 to August 2005

IBM Global Services (Delivery)

Telecom

Program Test Manager, IT PMO - iPTV Program Bell Canada-Bell XpressVu, Toronto, Ontario

I was Program Test Manager for IT in the Program Management Office of a large

development and integration project to implement iPTV over wirelines. The role included responsibility for defining the overall IT test strategy, defining and developing the end-toend SIT strategy and plans, staffing and managing the end-to-end SIT core team, and managing the execution of the complex end-to-end systems integration test, which covered functionality from customer orders through to billing and back-end financials, television use and service assurance. I worked collaboratively with the managers of other streams of the overall program (primarily the network and video technology groups) to define a layered testing model and negotiate responsibility boundaries, and I developed, negotiated agreement for, and implemented the iPTV program-wide defect management process. My role included responsibility for overseeing IT sub-project testing to ensure appropriate coverage and risk management, and to this end I reviewed IT sub-project strategies and plans, and conducted periodic assessments of the state of IT sub-project testing. (Program suspended by customer in August 2005.)

November 2016 Page 9 of 16



Project History

June to December 2004 **Program Test Manager, PMO – Integrated Lending Program** CIBC, Toronto, Ontario

IBM Global Services (Delivery) I was Program-level Test Manager in the PMO for the "front-end" sub-program of a large project integrating the bank's mortgage and lending applications to enable a consolidated suite of lending services to consumers. The FE program actually encompassed the legacy loan applications, as well as two mid-tier service layers and the proposed GUI for the integrated applications. I worked with all levels of management on the program to define the overall program test strategy and processes (encompassing all sub-programs). I developed the FE integrated test strategy for an overall team of 33 testers and worked with each of the FE project test managers to define their component testing and staff their sub-teams. (Program terminated by the customer.)

Banking Financial Services

October 2003 to May 2004

Program Test Manager, PMO - COFI Program

Hudson's Bay Company, Toronto, Ontario

IBM Global Services (Delivery) I was Program Test Manager on a 70-person project to customize and implement the Oracle e-business suite as a retail application for the client's big ticket line of business. The application functionality covered the full retail lifecycle: supply chain planning, procurement, merchandising, sales, logistics, order fulfillment and warranty servicing, and was fully integrated with the client's existing corporate and store systems, including vendor EDI, warehouse management, point of sale, sales audit, loyalty rewards, corporate financials, and management reporting. I developed and implemented a strategy for End-to-end Test to ensure data control, co-ordination among all participants and full auditability. As Program Test Manager, I developed overall strategies for and oversaw other major test activities, including performance test and data conversion test.

Retail

February to October 2003 Test Manager - Service Platform Teller Application

RBC, Toronto, Ontario

IBM Global Services (Delivery) I managed System Test and Systems Integration Test on a RAC iterative development project to develop a new teller application for the bank. I joined the project part way through test development with a mandate to turn the testing around (replacing another test manager). I redirected the test strategy to ensure data control and improved auditability for SIT. I designed and implemented processes tailored to the project and environment, including test metrics for management planning, control and communication. Although the process and deliverables I designed for systems integration testing were new both to the bank and IBM, I was able to satisfy the bank's auditors with evidence of both our preparation and test results.

Banking

I staffed and directed the 12-person mixed test team of client resources, independent contractors, and IBM resources. I also assisted and supported the client UAT manager through test strategy and scenario design and development, and test execution.

November 2016 Page 10 of 16



Project History

October 2002 to January 2003

IBM Global Services (Consulting)

Insurance

Consulting Executive Test Manager, PMO – Retail Integration Program
Major insurance company, Waterloo, Ont. (Client requested IBM not divulge name)

I was Test Manager on this IBM consulting engagement to establish and manage the Project Management Office for the Retail operations integration of two major Canadian insurance companies. I formally assessed the current state of Retail Integration testing, and recommended increased governance to ensure consistent application of good testing practices across 132 IT projects, and subsequently developed an overall Retail Integration Test Strategy for implementing the assessment recommendations. I established a Test Council and chaired weekly meetings to ensure appropriate levels of testing of the total solution. I developed an initiative to promote and institutionalize a formal process for Risk-Based Testing in all integration projects. I implemented a weekly Test Status reporting process for projects, and a Testing Scorecard for reporting status and issues to the Retail Integration Steering Committee. I participated in weekly PMO reviews of the prime projects, and in weekly Steering Committee meetings.

As a result of these initiatives, there was a significant increase in the testing rigor and discipline, and increased management visibility of, and confidence in, the testing process. At the conclusion of the engagement, I transitioned the knowledge and role to a client test manager.

December 2001 to March 2002

IBM Global Services (Delivery) Manager, System and Integration Test - Corporate Web Banking Bank of Bermuda, Bermuda

Managed "Alpha" test (equivalent to system test and modified systems integration test) of a new corporate web banking custom application. This IBM project included integration to the Bank's management system for corporate accounts. It was managed from Toronto, with the Development team based in California, and the client in Bermuda.

Banking

I joined the project (replacing the previous test manager) shortly before the beginning of test execution, with a mandate to implement a rigorous test. I redefined and redirected the testing strategy to improve the coverage and better manage the risk. I developed a realistic plan and convinced the project manager and client's CIO to implement an achievable test schedule. I staffed and directed the test team, and tailored and implemented management planning, control and communication processes. As test manager on this challenging project I made a key contribution to successful handover of a quality application for Bank acceptance testing.

November 2016 Page 11 of 16



Project History

February to June 2001

Manager, Integration Test – Promotional Funds Management Project

Shoppers Drug Mart, Toronto, Ontario

LGS Group (Delivery)

Retail

Managed systems integration test for this project designed to provide client's Marketing Finance and Merchandising managers with detailed reporting of promotional funds, revenue and expenses, through a new data warehouse and web-based reporting system. The project included modifications to operational corporate systems to extract promotional funds data at a finer level of granularity for feeding to the new data warehouse; and a new application for entry of adjustments.

I developed the strategy and plan for Integration Test, including balancing of differently stated production financial data. I managed Integration Test execution and the verification and acceptance process with Marketing Finance, making a key contribution to successful on-time implementation.

January to February 2001

Consultant - QA Assessment

Merrill Lynch/Spectra, Toronto, Ontario

LGS Group (Consulting) With another consultant, I performed a quality assurance assessment of the testing and release processes for a portfolio management application, and recommended process improvements and risk mitigation strategies to address issues which had been identified with the quality, cost and timeliness of application releases.

Financial Services

We conducted interviews and reviewed documents at Merrill Lynch and at Spectra (the software reseller), who had jointly commissioned the assessment, as well as at the software company responsible for developing the product. We developed recommendations for all three companies, including "quick hits" for the upcoming release, and mid- to long-term process improvements covering the entire release cycle: from content determination and scheduling, through development and system testing, to UAT. Finally, we prepared the consulting report and co-presented to executive management of the three companies.

June to November 2000 Manager, Integration Test - hbc.com

Hudson's Bay Company, Toronto, Ontario

LGS Group (Delivery) I managed the large and complex systems integration test of this new e-commerce site, involving more than 60 interfaces among new, existing and modified applications, and across NT, UNIX, and VM platforms.

Retail

I developed the test strategy, processes and plan, and led my core Integration Test team in developing and automating test transactions and scenarios. I secured buy-in from multiple organizations within the client's IT and business for my plan requiring extensive participation in the integration test from development and support teams. I subsequently managed the test execution and verification, staffed by a large team comprising the Integration Test Team and representatives of all participating applications. Testing was widely credited with the success of the site's initial launch and early business.

November 2016 Page 12 of 16



Project History

November 1999 to May 2000

Manager, Testing Team - POINTS Project

National Hockey League Players' Association, Toronto, Ontario

LGS Group (Delivery) I managed the test team of a complex application development project for labour union case management. This iterative development project was the pilot for the LGS reuse framework strategy and a new object oriented application development tool.

Professional Sports Labour Union I replaced a more junior test manager, as a member of a project management "rescue" team, with the mandate to turn the test effort around. I developed the test strategy and plan, and managed the final stage of test preparation, introducing management controls and refocusing the 6-member test team to a risk-based approach. I paired testers with programmers to share requirements knowledge and finish development, and then managed system test execution. In this role, I played a key role in project turnaround and successful conclusion.

February to October 1999 Manager, Integration, Testing and Implementation – Optimum Program Shoppers Drug Mart, Toronto, Ontario

LGS Group (Delivery) I managed systems integration test and corporate systems implementation for the pilot rollout of this new strategic Loyalty Program. I developed the integration test strategy and plan, operating within tight timelines, and involving a small ITI team and multiple development teams. I staffed the ITI team, and led development of test transactions and environment plans for development, testing, and corporate systems implementation. I managed the integration test of this complex solution bringing together existing and new software applications running on several platforms, both in the stores and at corporate headquarters, and including real-time satellite links between systems as well as batch

interfaces. I also participated in weekly program steering committee meeting with business

Retail

November 1998 to January 1999

Testing Process Expert - Reuse Framework

LGS Group, Toronto, Ontario

and IT management.

LGS Group (Consulting)

I developed the testing process flow and deliverables for the object-oriented SDLC in the new LGS reuse framework. I was a key player in the development of the entire SDLC process definition.

November 2016 Page 13 of 16



Project History

January to November 1998 Corporate Program Quality Assurance Manager - Y2K

Ontario Hydro, Toronto, Ontario

LGS Group (Consulting) Operating within the Corporate Program Management Office for Y2K, I defined the corporate-wide quality management program for the Y2K program at this critical provincial utility, and oversaw its implementation. I supported and assessed business unit Quality Assurance managers in their quality processes. I developed the framework and process for quality audits of business unit Y2K projects, including evaluation criteria and assessment procedures, and subsequently led project audits of Y2K projects at the power plants and throughout the corporation.

Energy Utility

February to October 1997 Project Manager - Dallas WMS Shoppers Drug Mart, Toronto, Ontario

LGS Group (Delivery)

I managed this project to test and implement a major upgrade to a large (3.5 million LOC) mission-critical warehouse management application. I developed the test and implementation strategies, processes and plans, and implemented a key user review and signoff process.

Distribution

I managed a project team of 14 including consultants, independent contractors, users and client IT staff. I managed the relationship with the application vendor to ensure timely resolution of issues, and liaised with the client's IT, logistics, and distribution centre management.

November 1996 to January 1997 Test Manager - LMS Billing

Livingston Logistics Management, Toronto, Ontario

LGS Group (Delivery)

I designed the time-boxed system test strategy, and led the systems testing team for a custom client server billing application with interfaces to several packages. I also provided direction to users in development of their UAT test cases, test data creation and setup. I managed a mixed team of user personnel and development team members during the test

execution phase.

Distribution

May to September 1996 Project Manager - Y2K Planning and Analysis, Group Life and Health Canada Life, Toronto, Ontario

LGS Group (Delivery)

Insurance

I managed the Year 2000 planning and analysis project for the Group Life and Health division of this major Canadian insurance company. The project involved developing and delivering a business and technical impact report and high level plan for the subsequent conversion project.

November 2016 Page 14 of 16



Project History

February to April 1996

Process Engineer - Year 2000 methodology

LGS Group, Toronto, Ontario

LGS Group (Consulting)

I designed and developed the testing component of the LGS Year 2000 methodology.

January 1996

LGS Group

Insurance

Consultant - Reset Product Management

Workers' Compensation Board of Ontario, Toronto, Ontario

(Consulting) **Public Sector**

After working on the Reset program delivery project for WCB, I consulted on design and implementation of product management and help desk processes for the program.

July 1994 to December 1995 Assistant Project Manager & Quality Assurance Manager – Reset Development Workers' Compensation Board of Ontario, Toronto, Ontario

LGS Group (Delivery)

Public Sector Insurance

As Assistant Project Manager, I acted on the project manager's behalf in high-risk areas requiring large day-to-day time commitments, e.g., legacy interface testing, maintenance, system testing. I also managed the vendor side of the acceptance process for the project manager. In my QA role, I acted as a consultant to managers and team members on quality processes. I monitored processes, identified risks, and recommended and followed through on process improvements.

November 2016 Page 15 of 16



Professional Memberships

- Association for Software Testing
- ❖ Toronto Association for Systems and Software Quality (TASSQ) Board Member, 2004 to 2008
- Shape Forum (Software as a Human Activity Practiced Effectively—Gerald M. Weinberg's online community for consultants and computer professionals) – 2001-2008 (Shape end) - Volunteer moderator, 2007
- ❖ IBM Canada Test Community of Practice, Core Team 2003-2006

Education and Professional Development

| University of Toronto | ❖ Bachelor of Arts, 1981 | |
|---|--|--|
| AYE Quartet Albuquerque | Change Artistry, 2013 | |
| Association for Software Testing | ❖ Black Box Software Testing Foundations, 2012 | |
| Workroom Productions, London | ❖ Getting a Grip on Exploratory Testing, 2009 | |
| Weinberg & Weinberg, Albuquerque | Designing Experiential Sessions and Workshops, 2009 | |
| | Consulting Skills Workshop, 2006 | |
| | Problem Solving Leadership, 2001 | |
| AYE (Amplifying Your Effectiveness) Conference, Phoenix | 2009, 2008, 2007, 2005, 2004, 2003, 2002 (presented in 2006) | |
| CAST | 2012, Test Coach Camp (peer conference) | |
| (Conference of the Association for Software Testing) | 2008, volunteer facilitator | |
| Agile Alliance | Agile Conference, Toronto, 2008 | |
| IBM | Blue Horizon Conference: 2004, 2003 | |
| | ❖ Rational Test Tools, 2004 | |
| | Rational Unified Process Concepts Workshop, 2004 | |
| | ❖ IBM Global Services Methods, 2000 | |
| Satisfice, Inc. | Rapid Software Testing, 2006 | |
| Los Altos Workshop on Software Testing | LAWST 14: "Test Modeling", 2002 (peer conference) | |
| Quality Assurance Institute | Effective Methods of System Testing, Quality Assurance Institute, 1998 | |
| (QAI) | International Conference on Software Testing, Orlando, 1999, 1997 | |
| NADUM | ❖ Facilitating Skills, 1996 | |
| GE Advanced Concepts Center | ❖ Object Oriented Methodology, 1993 | |
| Quality College of Scotland | Software Quality System Assessment (TickIt, ISO 9001): Lead Assessor Training Course, 1993 | |
| Technology Training Corp. | Applied Software Measurement, 1992 | |
| J. J. | ❖ ISO 9001/9000-3: Applying ISO Guidelines for Software Quality, 1992 | |
| Rick Ball & Associates | ❖ Software Inspections, Walkthroughs and Reviews, 1991 | |

November 2016 Page 16 of 16