



Microsoft® .NET Framework and Visual Studio® .NET Help CGI Increase Functionality, Expand Future Capabilities and Increased Overall Operational Efficiency

A case study

June 2004

Summary

CGI's AutoPlus service provides comprehensive claims and policy information to insurance companies and brokers to assist in underwriting automobile insurance risk. Created in 1988, the user base has grown to include virtually every non-governmental auto insurer in the country, as well as their brokers and agents. Over 10,000 users conduct more than 2.5 million transactions annually. CGI's customers wanted to change the way that they received the information. Traditional 'host to host' clients were demanding different access methods, and in many cases were asking for closer integration of the AutoPlus service with their own systems. As usage levels grew, the capacity of the old system was strained, and the development and deployment of new products and services was being hindered.

CGI wanted to improve the service while eliminating any potential impact on the customer, so the company decided to revamp the AutoPlus service to increase functionality and expand delivery options. CGI chose to redesign AutoPlus using Microsoft .NET Connection Software and Visual Studio .NET development system which provided the company with a lower total cost of ownership, increased functionality and operational cost savings. In addition, CGI constructed an environment which allows development of new products and services to meet the changing needs of our insurance industry clients, who are now more accepting of new methods.

Situation

When you are buying a used car, you want to know everything there is about that vehicle. From past accidents to maintenance, you need to get all the relevant information before you make a decision. The same holds true for insurance companies who are underwriting not only the vehicle, but also the driver. Where do they go for that kind of information? – CGI.

CGI (TSX:GIB.A and NYSE:GIB) is the largest Canadian independent information technology (IT) services firm and the fifth largest in North America based on its headcount of 20,000 employees. Serving more than 3,500 clients worldwide, CGI offers a full range of services, including consulting, systems integration and IT and business process outsourcing, as well as customized industry-leading solutions. In the insurance industry, CGI's extensive experience is based on its work with more than 800 insurance companies in the U.S., Canada and Europe.

As part of its solutions offerings for the insurance industry, CGI manages an Automobile Claims History service, called AutoPlus. AutoPlus provides detailed reports from an in-house database, which is Canada's most comprehensive personal auto insurance database, containing more than 40 million policy records and 25 million claims records. This information is supplied by every non-governmental insurer, writing automobile insurance in Canada.

AutoPlus enables insurers and brokers to access a customer's insurance claims history, regardless of which company the customer was insured with previously. AutoPlus provides up-to-date, comprehensive reports that allow point-of-sale brokers and agents, and underwriters to properly assess risk and determine appropriate premiums for automobile risk.

The AutoPlus user base has grown tremendously in recent years, which presented a potential problem in terms of capacity levels. In addition, customers started to express greater interest in integrating the information from AutoPlus more closely with their own systems, but the current delivery model could not accommodate that. As a result, CGI wanted to make the necessary changes before it began to affect customer service.

"User volumes were growing dramatically, but also tied to that was the manner in which our clients wanted the information. Within the past two years, we've seen a lot more demand for Web delivery and also application to application communication. This meant we had to make some significant changes," says Wayne Beck, VP Consulting Services at CGI.

Solution

To address the challenges at hand, CGI looked at a number of options, ranging from upgrading the platform, to redeveloping the service in any of the various languages. The key determining factors were whether or not existing developer skills could be leveraged, and if the new solution would be flexible to meet future needs. After much consideration, CGI chose to redesign the AutoPlus service using a Web services architecture.

Once that decision was made, the development team still needed to choose which path to take. After learning about Microsoft's .NET development system, CGI chose Microsoft software.

"When we reviewed what we already had, most of our systems were already Microsoft products, so it made sense for us to go with an environment that our people were familiar with," says Beck. "But the biggest factor was that we had a fundamental belief in Microsoft's strong commitment to the .NET platform and the vision for future capabilities. We believed it was the right direction for us to take."

CGI migrated the existing AutoPlus application using .NET connection software and used Web services to connect the various layers and legacy systems within the application. Using the .NET Framework, the development team built a transaction layer on top of the existing proprietary database – RTM – where all the claims information resides. Added on to that was the data access layer and business logic layers where all of CGI's business rules are implemented. The system uses Web services in the presentation layer to expose business functionality and allow interoperability with other systems – internal and external.

"Because of the advanced features of .NET connection software, we were able to build it so that it didn't matter what database we used, and we can access the database without having to recode any of our business logic," says Rob McGill, Manager, Technology Planning at CGI.

"Additionally, when we architected this new system, we wanted the components in our business logic layer to be reusable whether or not we were accessing the business function over the Web or through Web services, or whatever other access methods may become available in the future," adds McGill.

As a result, CGI can now offer AutoPlus reports to customers online via a Web browser, or through an application to application model via Web services.

Benefits

Using Windows® 2000 operating system, the .NET Framework, and Visual Studio .NET, CGI was able to easily redesign its AutoPlus solution – on schedule and on budget. And not only did it meet current user needs, but provided a platform that could meet future growth and demand for increased functionality. Despite limited experience in the .NET environment, the development team found the process to be intuitive and they were able to make use of existing language skills. This provided CGI with a low total cost of ownership and high return on investment, while at the same time creating new revenue streams through added functionality to the existing application.

Since the deployment of the .NET-based solution, CGI has been able to develop and deploy more new products and services in the subsequent six months, than it had in the preceding four years.

Customer Profile

Founded in 1976, CGI is the largest Canadian independent information technology (IT) services firm and the fifth largest in North America based on its headcount of 20,000 employees. CGI provides end-to-end IT and business process services to some 3,500 clients worldwide from offices in Canada, United States and Europe, utilizing a highly customized, cost efficient delivery model that combines its on-site and off-site operations.

Business Situation

Since its creation in 1988, the AutoPlus system user base has grown dramatically, as it is increasingly used by front line, point-of-sale staff. Additionally, a growing number of insurance industry clients want better integration of information into their own systems. As usage levels and the acceptance of Web-based delivery grew, the capacity of the old system was strained and CGI wanted to eliminate any potential for negative impact on customer service. The company realized the need to reposition the AutoPlus service without disrupting current services.

Solution

CGI chose to redesign the AutoPlus service using Microsoft .NET framework and Visual Studio .NET and a Web services architecture. The development team looked at using both the J2EE platform and the Microsoft .NET platform, but chose Microsoft so that they could leverage existing developer skills and infrastructure.

Rapid Development & Deployment

Although developers at CGI were new to the .NET architecture, they found it was easy to use and the learning curve was short. As a result, the development team was easily able to finish the project on time and on budget.

"One of the advantages of the .NET Framework is that there are more than 20 supported languages. We used Visual Studio .NET so that we could leverage the existing skills of our development team," says McGill. "The .NET development system was easy to learn, understand and work with."

Increased service functionality

When CGI migrated the AutoPlus service to the .NET platform, they were able to easily add new functionality which helped increase customer service. In particular, CGI was able to build a rules engine that has been applied to the creation of an Automobile claim 'alert' product called Claim. This product helps insurance companies review claims in an automated fashion and sends them an 'alert' when certain conditions arise, which may require deeper analysis of the risk.

John Mitchell, Manager Corporate Business Strategy, Portage Mutual Insurance is a CGI customer who uses this new service.

"The claims check allows us access to data in a quick, seamless fashion. The ease of use and value of the data that we get from the Claims check database makes this a practical, useful tool in the reduction of fraud," says Mitchell.

Because of the reusability of Web services built with the .NET Framework, CGI was able to modify the application to build new products that would meet new customer needs. Additionally, this meant new ways to generate revenue, with the new services in CGI's portfolio.

"We've been able to take the same basic platform for AutoPlus and modify pieces of it as well as assemble other features to create new reports like AutoPlus Gold and AutoPlus Platinum, which include information tailored for a specific business problem. We're able to develop these reports much faster because of the inherent re-use concept that is built into .NET," says Beck.

Reduced TCO

"We chose Microsoft .NET technology because, from our research, we saw that it would result in the lowest overall total cost of ownership. I can tell you that our TCO has gone down dramatically from a data centre point of view. We're now looking at an annual reduction of 15 to 20 per cent," says Beck

With the lower cost of ownership, CGI was able to realize a faster return on investment as well.

"On our investment to re-platform the product, purely from operational savings, we get an ROI of 18 to 24 months – and that's not counting all the additional revenue we get, or the speed, efficiency, and response we receive for new products," adds Beck.

Extending into the Future

With the initial re-platform work behind them, CGI is looking to expand the delivery options with AutoPlus to include smart devices.

"Microsoft's single approach to both desktop and Web applications is a good thing. Developers using the same skills and tools have a lot more ability to easily develop desktop applications, Web applications, and applications geared towards handheld devices – that just makes good business sense," says Beck. "We've already developed some prototypes and we're excited about where that could take us in the coming months."

Quotes:

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Technology

Windows 2000
Visual Studio® .NET
Microsoft® .NET Framework

Benefits

- Increased service functionality
- Rapid development and deployment allowed project completion on time and on budget
- Reduced TCO for operating expenses by more than 15 – 20%
- Rapid deployment of new products and services to meet our clients changing needs.

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CGI Corporate Profile

CGI clients around the world gain the advantage of knowledgeable, dedicated partners working to develop and implement IT oriented solutions to address business and technology challenges.

CGI is one of the largest independent information technology service firms in North America. CGI couples extensive industry sector expertise with a full range of services including strategic IT and management consulting, systems integration, and management of IT and business functions.

