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Legacy Renewal

by Ken Bass

Legacy Renewal, simply stated, is the process of converting an existing production application into a more modern application system. There are many assumptions when people hear the term Legacy Renewal. The fact is that almost every system development project can be categorized as a Legacy Renewal project if there is existing software currently performing the functionality. All development methodologies have a task that is “as-is” or current system analysis. This in fact is Legacy Renewal that we have all been performing for years.

- ◆ There are many problems growing in the information technology industry that are driving more Legacy Renewal projects over the past three years and will likely continue to increase.
- ◆ The talent pool that knows the language used when the systems were first developed is declining.
- ◆ The language and/or database in the system are difficult to enhance.
- ◆ The application system is more valuable to the organization as a web application.
- ◆ The core business in the system needs to be exposed and reused by other applications.
- ◆ The expense of supporting the hardware that runs the application can be reduced.

The methodology and approach widely differ based on the structure of the existing legacy application, the service provider, automation software, and the needs of the clients. Legacy Renewal projects can vary anywhere from a mission critical mainframe application down to a spreadsheet conversion. With its wide difference in projects, there is no single approach that can be used in every situation. The methodology and approach must be flexible to address these differences. This will also dictate any use of automation software

that converts code. This conversion software has to be specifically written to parse the existing language. It also has to be able to output the syntax of the to-be application. This has proven difficult for most conversion software providers. The main issue with automated conversion is the varying syntax of the language of the old software. This is even true for COBOL because it has so many variations in the language. It is also difficult to “translate” a line of language to a different language, if the function is language specific. This is the case with COBOL redefines and 88 level checks. Conversion software also has to “dummy down” the new language because it can not take advantage of the new languages framework. Even with these inherent issues, conversion software is improving as the Legacy Renewal market matures.

The tough question, to enhance or not to enhance? One of the main reasons a legacy renewal project is undertaken is the fact that enhancements cannot be easily made in the current environment. Over the years, this often results in a list of many required enhancements. So this question always has to be addressed during a conversion. The quick answer is always “yes-enhance”. But based on the system use and client needs, this is not always the best answer. Incorporating enhancements during the renewal process will restrict the effective use of conversion software, add development tasks to incorporate the enhancements, significantly increase testing time and costs, and increase the training of users.

QA Technologies specializes in Legacy Renewal projects with our Vintage Restore service offering. We use a flexible approach customized for each project. We have partnerships with companies that can provide automated conversion software, but remain vendor neutral for the benefit of our clients. A majority of legacy renewal projects also include moving the software to a web based hardware platform. This will break parts of the legacy application that depend on mainframe



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infrastructure software. QA Technologies can also provide software components to address the new platform requirements of security, code table management, web frameworks, and system BPM. For more information about these services, please visit www.qat.com.

QA Technologies is near completion of our latest legacy renewal project at the State of California. These are some of the problems that they were encountering:

- ◆ Key systems running Federal mandated Unemployment Insurance, Disability Insurance and Employer Tax processing are written in 30-year old technology and difficult to maintain.
- ◆ Budget constraints and mainframe costs require more effective application development and maintenance approach.
- ◆ Need to better understand, document and reuse business intelligence embedded in the legacy systems.
- ◆ The COBOL talent pool in California is rapidly declining.

When the project started, these were the main objectives:

- ◆ Transition monolithic mainframe architecture to more agile SOA environment.
- ◆ Improve functionality and reduce cost of existing mainframe systems.
- ◆ Enable mainframe to co-exist with .NET and Web service technologies.
- ◆ Implement a more productive development environment enabling quicker reaction to changing legislation and requirements.
- ◆ Deliver reusable services that are technology and platform independent.
- ◆ Redesign the system to include several enhancements.

The new system is now developed in a .net / SQLServer environment and is ready to be exposed to the organization with SOA web services. The business rules have been extracted from the old system and incorporated into the new system with the required enhancements. Training is being conducted for the application code base as well as the users of the system. Automated conversion was used in the system conversion in some areas. Overall, this new system was converted with 75% less code than the original system. The client will realize major savings with the reduced cost of the new platform.

Start the discussion about your legacy renewal needs with us today, give us a call at 800-799-8545 / 402-391-9200 and ask for Chuck Synder or Ken Bass.

Learn more about QAT's legacy renewal/modernization service offering, QAT Vintage Restore, at QAT's web site.

QAT offers modernization solutions for the following situations:

- ◆ **Mainframe or Legacy System - .Net Based SOA**
- ◆ **Mainframe or Legacy System - Java Based SOA**
- ◆ **Mainframe or Legacy System - Custom Developed .Net or Java Based application**
- ◆ **Mainframe or Legacy System - Traditional CA Gen or SOA**

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