Integrating Multiple Databases for The Institutes

QUICK FACTS

Objectives
- Migrate existing third-party SQL database into the client-hosted Oracle database infrastructure
- Ensure that data from multiple sources are incorporated in the transition
- Stimulate increased membership value, membership recruitment and member retention

Challenges
- Coordinate with several client vendors that utilize different processes to seamlessly integrate the databases
- Manage relationships with the vendors to ensure project deliverables are achieved on time
- Complete the transition within the optimal window of time, so as to not interfere with any of the client’s major events throughout the year

Implementation Highlights
- Adapted our initial recommendations based on client discussions
- Leveraged TEKsystems’ Montreal Solution Centre and Bangalore Solution Center to assemble a skilled team of resources
- Took on leadership role as overarching project manager for the client’s vendor population

Technologies Supported
- Adobe ColdFusion
- Atlassian JIRA
- Microsoft SharePoint
- Oracle
- Oracle Forms
- PHP
- PL/SQL
- SQL Server

Results
- Built a database application layer between the two systems that would allow The Institutes to obtain data from multiple transparent sources
- Completed the transition in a time-effective manner
- Earned the client’s trust as The Institutes hired TEKsystems’ Training and Education practice to coach users on Agile methodology

Client Profile
- Industry: Education Services
- Revenue: $27 million
- Employees: Approximately 100
- Geographic Presence: Headquartered in the Northeast, with national reach
Client Profile

The Institutes is a leading organization that presents proven, results-driven educational solutions to businesses in the risk management and property-casualty insurance industry. With a range of industry-specific courses available, including college credit courses and other programs, the client is widely respected for its expertise in professional development. Through its online and traditional in-person classes, the client offers nationwide coverage to its customers.

Project Overview

An online presence is a key business tool, and websites serve many functions, allowing potential customers to search for information, conduct transactions, review products and even contact businesses directly. Organizations strive to transition and update their websites in an effort to modernize their online presence and stay relevant, and integrated websites that combine optimized front-end usability with back-end functionality deliver services faster and at lower cost. These websites offer targeted content that is especially valuable to customers in the financial services industry, who rely on a website to search for a service quote, find an agent, report a claim or conduct other transactions based on their individual account information or user profile. Yet, many businesses face a challenge before they even reach the website redevelopment phase in the form of addressing their legacy information systems.

The fast pace of change in the IT industry leads to overworked and lower-valued legacy systems, and the eventual decision is made to migrate data when it becomes too costly or complex to continue upgrading or supporting the legacy system. Migrating data can be risky for businesses; if the activity is not properly executed, critical information and intelligence can be lost in the transfer. When organizations attempt to migrate data from multiple sources to a single target, the transition can become even more demanding and complicated.

By carefully managing the data throughout the consolidation and transition process, organizations are better able to realize the full potential benefits of the investment.

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EXECUTIVE SUMMARY

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Situation

Having formally affiliated itself with the Chartered Property Casualty Underwriters (CPCU) Society, the client sought to integrate its existing Web portal with the CPCU Society to form a holistic and unified database. Specifically, the client wanted to merge a third-party system with its infrastructure. As opposed to being separate from the CPCU, the database—utilized by all society members—would be more beneficial for The Institutes and the members themselves standing as a single, cohesive platform. The revamped system would:

- Enable members to purchase materials and pay membership fees in one order and generate one invoice
- Report society financials through The Institutes’ infrastructure and Microsoft Dynamics NAV integration
- Provide a single location for contact information and purchase history, to support the client’s marketing efforts
- Characterize the rebranded identity of the organization in alignment with the client’s business strategy
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• Shift away from proprietary systems, reducing licensing fees and providing easier integration

Ultimately these changes would help the client reach its overarching goals of increased membership value, increased membership recruitment and increased member retention.

Several challenges made the consolidation effort difficult for the client to tackle alone. Four different vendors had relationships with The Institutes and the society itself. With multiple vendors involved, different practices and processes were at play, making the database integration more complex and complicated than it would be otherwise. For example, both Agile and Waterfall methodologies were used within the client’s vendor partnerships.

Open and effective communication would also be difficult to achieve with numerous vendors. Finding common ground would be critical to integrating process, execution and development between the user interface and databases. Additionally, the client’s development team was widely dispersed all over the country, hindering project coordination, communication and seamless implementation.

Another obstacle the client faced was the time sensitivity of the project. The society hosts many major events throughout the year. Ideally, the application would be done before these events. Meanwhile, membership renewals happen in February each year. It was critical that no changes be made during this period, as any bugs or defects present during registration could create significant financial implications for the client. Bearing this in mind, the work needed to be completed within an optimal window of time that did not interfere with any of these milestones in their calendar.

Solution

To maintain open communication and coordination with the various vendor partners throughout this process and mitigate any potential risks, TEKsystems would step up as a leader and overarching program manager for all.

TEKsystems recommended a two-phased migration plan to merge the client’s databases;

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1. Inception

The initial phase would provide us with a framework and the critical knowledge necessary for successfully developing the migration solution utilizing Agile development methodology. We would outline the business processes and requirements that the migration called for and evaluate the architectural landscape. To qualify and validate this effort, TEKsystems would also explore and define the priorities and business value of the migration. A series of plans would be developed—including a release plan, communications plan, and project governance and resource plan—in order to map our implementation and manage the client’s expectations. As a final deliverable, we would provide a level-of-effort estimate for completing the migration based on the backlog, nonfunctional requirements and architectural requirements.

2. Construction

TEKsystems would then identify and replicate data objects from the third-party system into The Institutes’ infrastructure so that common society data can be joined on the new platform. We would integrate corresponding components
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from the systems based on the requirements and website needs defined through collaboration with stakeholders at the CPCU Society and The Institutes. TEKsystems would also migrate public-facing website data from the third-party database and ensure website functionality be properly transferred. We would enable holistic viewing of member data for the client’s marketing efforts, and establish event management and registrations on the new platform. We would also provide user acceptance testing support throughout the Construction phase.

Given our past performance in application services and our flexibility in building and scaling custom solutions, TEKsystems was selected for this engagement.

Results

Although we intended to complete this initiative in alignment with our proposed two-phased solution, upon completing the Inception phase we learned that there was a more efficient approach to achieving the client’s goals and adapted our solution. This project originated as a front-end database consolidation effort, yet during early discussions with the client, we honed in on what they really wanted. As it turns out, consolidating the database was not necessary from a technical standpoint.

Instead, the TEKsystems team built a database application layer between the two systems that allowed The Institutes to obtain data from multiple transparent sources. While this approach still enabled The Institutes to capture all data initially required of the migration, it also helped garner additional benefits. Particularly, our adapted approach was more advantageous for The Institutes as it was more time-efficient than completely overhauling its system and as a result, the client was able to bring the new Web portal to production nearly six months earlier than scheduled.

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Leveraging TEKsystems’ Montreal Solution Centre and Bangalore Solution Center, the team included the following skill sets: delivery manager, project manager, technical team lead, technical and data architects, Oracle database developers, business analyst, PL/SQL developer and quality assurance analyst. The TEKsystems team took on an overarching project manager role, coordinating our work with the other vendor stakeholder parties as necessary. This not only ensured the work was facilitated in an organized, seamless fashion but also helped the client understand how to effectively manage multiple vendors.

The client’s experience with TEKsystems was so positive that, following this program, they chose to work with our Training and Education practice to coach and train users on Agile methodology.

Key Success Factors

• Flexibility.

This program was successful and maximized efficiency because of our flexibility and ability to adapt. Upon having our initial meetings with the client during the first phase of the program,
we realized that our database consolidation solution could be adapted by building a layer between the two systems. This alternative solution was more time-effective for The Institutes, who had time-sensitive events throughout the calendar year.

- **Open and Consistent Communication.** The TEKsystems team including sales, delivery and development resources, maintained consistent communication throughout this engagement. Daily scrum meetings were held by the project team, and the delivery and project managers held daily phone calls to stay abreast of the progress we were making and ensure we were staying on track. Biweekly management touch point meetings and weekly program status reports also promoted transparency with the client and kept both TEKsystems and The Institutes on the same page throughout the program.

- **Engaged Client.** TEKsystems built a relationship with The Institutes, and over time they viewed us as a trusted partner who was equally invested in their success. Of the various partners the client had, we stepped up and took the lead. This eliminated gaps in communications and mitigated project risks. As a result, the client was engaged in what we were doing, actively participated and collaborated with us as needed, and helped us successfully deliver.

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