

## Customer Case Study: Synovus Financial Corp. Takes it to the Bank Using ActiveVOS

### Executive Summary

Synovus Financial Corp. is a diversified financial services holding company with more than \$30 billion in assets, based in Columbus, Georgia. Synovus provides integrated financial services including banking, financial management, insurance, mortgage, and leasing through 35 banks, 440 ATMs and other Synovus offices in Georgia, Alabama, Florida, South Carolina and Tennessee. Long-term financial growth has placed Synovus in the top level of the high performers in the financial services industry for three decades. Synovus has grown from a \$147 million one-bank holding company in 1972 to today's \$30 billion diversified multi-state financial services provider.

With such rapid and expansive growth, Synovus faced many integration challenges. The company is now using the leading visual orchestration system, ActiveVOS™, to integrate and manage multiple mission-critical applications as part of its services-oriented architecture (SOA) implementation. The benefits so far? Reduced integration costs through the reuse of architecture and services, a scalable platform, faster time to market and a higher degree of customer satisfaction.

### Needed: Scalable platform for growth and seamless integration

Synovus' existing implementation of Internet banking was relatively outdated and both the business and customers wanted a single view of their accounts no matter how they accessed the information. Over the years, the bank had developed many different systems of record as a result of years of point-to-point integration projects, which lead to increased business process inefficiencies and made it extraordinarily difficult to respond to changing business requirements, like a new Internet banking system. In addition, Synovus had spent three years trying to implement another vendor's middleware, which ended up being just another proprietary layer with which they struggled.

Reassessing the situation and with a new banking systems vendor in place, Synovus' Innovative Solutions team faced three challenges with the rollout of the Internet banking customer portal: 1) to build the SOA environment and get the services for the SOA built; 2) get the vendor up and running, making a lot of branding and functionality changes and; 3) build a customer authentication system.

In the new banking system, Synovus was getting a new platform with the enhancements they were looking for plus "real-time enrollment," which was Synovus' responsibility to implement. In addition, the new Internet banking being developed by Synovus had its own challenges. Synovus needed to implement customer

credentials and knew that within six months of the first rollout, they would also need to implement a fraud detection system as part of the customer login and add additional authentication features. Finally, they needed to keep everything they were creating in synch with the changes in the other legacy systems. In short, even though Synovus had confidence in their new Internet banking platform, integrating it into Synovus' existing applications and security systems was a very significant challenge. This challenge would make an ideal test case to demonstrate how an SOA could make a business more responsive and flexible.

Synovus ended up with a strategy more far-reaching than originally planned. Synovus' approach to SOA was that it wasn't just an implementation; it was a philosophy. The Innovative Solutions team needed one implementation project to prove to the executive team that SOA works and could be scaled out to various business functions within the company.

And it clearly succeeded. Internet banking was just the first successful SOA implementation. Synovus' SOA environment now integrates not just Internet banking, but integrates mobile banking, its call center, its branch platform, its loan origination system (LOS), debit purchase perks and a new payment system called Secure Vault Payments™ (SVP) that offers a faster, easier way to shop without revealing personal financial data. Integrating the SVP – another complex integration - was a win-win all around; the consumer has their identity protected, a fraud detection system exists, the merchant is paying less than they would have had they chosen the credit card route and consumers use their financial institution as a trusted source. And it could never have been done without an SOA. Synovus knew they were going to integrate more and more and more, product after product after product. Synovus' SOA environment wasn't built just for internet banking; SOA was built as a company-wide strategy.

What was the "secret sauce" that enabled Synovus to achieve this major win for SOA? What allowed it to both rollout new and improved systems while integrating existing applications? The answer was a visual orchestration system (VOS), specifically, ActiveVOS from Active Endpoints.

### **Project goes live in record time, results seen almost immediately**

The Internet banking project was started on August 27<sup>th</sup>, 2006 and Synovus originally had nine months to achieve their goals. The very next day, the CEO asked the IT team to cut the timeline to seven months. It was an impossible task on the 27<sup>th</sup>; it was improbable on the 28<sup>th</sup>. Many first SOA projects follow the conventional wisdom to never to pick a high profile project as the first SOA implementation. For Synovus, this was a make-or-break project. They needed Internet banking to be competitive and the project had maximum visibility throughout the company.

At Synovus, there is no funding for "test projects." R&D funding is available only for projects that have immediate return to the business. The Internet banking project was 70% funded by corporate and the IT division funded the remaining 30%. Synovus estimates that it went a little over budget that first year, but continuing to use the same infrastructure every year since then has saved them money.

The Innovative Solutions team achieved its three goals within seven months, and saw results almost immediately, in the form of reuse of their entire architecture and the services they built.

## Reuse as much as possible

Synovus achieved business value in two important ways. First, their architecture is set up as a demilitarized zone (DMZ) type of SOA environment with two different data centers. Essentially they have become their own "SOA service bureau." Now, all of the capabilities within that infrastructure are reused when a new project is implemented.

They don't have to rebuild the infrastructure again; the servers are in place; the capacity is in place; the firewalls, the gateways and the visual orchestration system are in place and all are ready to go when needed. Sharing data center assets is both cost effective and environmentally sound.

Second, having implemented an SOA, application services are reused. Through the use of a visual orchestration system (VOS), Synovus has achieved the ultimate objective of an SOA: application reuse. And it's done so far more quickly and easily than many people would have predicted, thanks to the VOS.

These two benefits deliver powerful, continuing results to Synovus. From a project completion perspective, Synovus today can pull off multiple projects that before their SOA implementation they had no capability of achieving individually, much less at the same time, all in a matter of months, not years. Every single project since the Internet banking rollout either reuses the environment or the services or both.

Synovus' ROA from its investment in a visual orchestration system has been wildly successful; the ROA is in the neighborhood of 65% cost savings for SOA-based projects. Synovus has found that compared to non-reusable physical infrastructures, they generally see a 30-40% cost savings. If they reuse both the infrastructure and services, they see a 60-65% cost savings. While savings in the first project might be modest, the real ROA is in the second, third, eighth, tenth, *etc.* projects. Labor and quality assurance (QA) are the primary costs, not the infrastructure and services. And it's labor and QA that benefit most from the quality and cost savings of an SOA.

For its mobile banking application, Synovus used all the same Internet banking services. It was in this second project that the benefits of SOA became apparent. Less than 800 hours of development, architecture and QA were invested in a project that brought a whole new channel to Synovus. Development costs were almost nothing, just a nominal amount for QA and some architecture.

Since mobile banking, Synovus has completed two other projects that started in January and both ended two months later. One project involved their purchase rewards, when they moved their debit cards from one company to another. Because of reuse of architecture and services, this was not a big deal for the development group. Another project where Synovus was taking the business of the rewards system from one company and moving it to another required them to build sixteen new services, but there no new servers were needed because the infrastructure was reused. There were no infrastructure costs because of the environment that was built using ActiveVOS; costs were purely in development.

Implementing an SOA clearly enables Synovus to be much more flexible and agile, not only in reuse, but in a faster time to market with new and updated products, and in turn, providing a higher degree of customer satisfaction. Now, Synovus is able to pull off things that they couldn't even conceptualize two years ago.

## **Cross-organization collaboration - the successful alignment of the IT and business teams**

Synovus' Innovative Solutions team is truly a cross-functional team by straddling the business and IT sectors of Synovus. To maintain this balance, the Innovative Solutions team meets on a quarterly basis with the business and IT sectors to determine enhancements and requirements.

Synovus' Center of Excellence (CoE) is more of a strategic and tactical group of people called the Change Control Board (CCB), and they act as configuration control. The Innovative Solutions team looks at all the services that are being invoked in production and their failure ratios, with fault ratios being addressed on a weekly basis. This is another benefit of a VOS, since it provides this information directly. If there's any change that's going on in the environment, the Innovative Solutions team manages that change before it goes to the CCB, ensuring nothing is being changed that is inadvertently incorrect.

### **Solution: The leading visual orchestration system, ActiveVOS**

The centerpiece of Synovus' SOA implementation is its visual orchestration system, ActiveVOS. For authentication, CA's Netegrity is used as the single sign on authentication from a customer's perspective with Novell's E-Directory as the customer directory.

From a SOA perspective, all services are put in a library and each consumer of the services (Internet banking, loans, debit card platform, *etc.*) is given what Synovus calls a virtual WSDL. The virtual WSDL links to a library where Synovus estimates they have six hundred unique services. For example, with the integration of SVP, Synovus had seventeen services. Eleven of them came directly from the library. The consumer immediately gets all of their services from Synovus' gateways. .NET is used, as well as some Java web services (JWS).

Some of Synovus' branch servers supply services; others services come from third-parties which Synovus gateways manage from an authentication perspective and forward to the third-party for execution. In Internet banking specifically, Synovus uses Metavante, Total Systems (TSys) for credit cards and Netegrity for authentication but it also has some enrollment processes that it consumes.

## **Lessons learned – but highly satisfied and planning more integration projects**

Internet banking was Synovus' first attempt at implementing an SOA and significant lessons were learned. Synovus' Innovative Solutions team succeeded with an incredibly visible project as the first SOA implementation, though some might think this risky. However, due to careful selection of technologies with a focus on ease of implementation, Synovus was wildly successful, with the CIO and CTO fully understanding that, despite some small teething pains, SOA was successful in integrating multiple systems together, and continues to do so.

An unexpected lesson for Synovus was they learned they now need more documenters than developers. They used to have one or two documenters on the implementation team but found out the developers were actually doing most of the work to figure out what it is they were supposed to build. Once they understood what they needed to build, they quickly turned it around with ActiveVOS. The developers turned the projects around so quickly that Synovus realized they needed three documenters per developer.

Synovus approached their SOA as a philosophy and they get payback every single day. Without Internet banking, they were running 4M transactions/month. Now they are running 20M transactions/month, in just three years.

Finally, Synovus learned QA is king. They needed to create a full methodology in QA than just running a unique set of tests every time. Synovus needed to build a set of standards and governance processes to validate against principles and ensure services were built for reuse, as opposed to building services for specific projects.

With these lesson internalized, there are no longer internal conversations in Synovus about other alternatives anymore. SOA is just "the way to do it" and all of their integration is planned and executed the same way, growing every year and taking bigger leaps and bounds.