



OPTIMOS

# Optimos Enterprise Helpdesk Automation Solution Case Study

*IT Help Central*

National Science Foundation



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## Background

The National Science Foundation (NSF) is an independent federal agency created by the National Science Foundation Act of 1950. NSF is committed to ensuring the nation with a supply of scientists, engineers, and science and engineering educators. The NSF funds research and education in many fields of science and engineering through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations, and other research institutions throughout the United States. The Foundation accounts for about one quarter of federal support to academic institutions for basic research.

## Business Challenge

The National Science Foundation, Information technology directorate is responsible for supporting all IT solutions throughout the agency for both internal and external users. For several years, there existed no solution to record, track, and manage support requests. Microsoft Outlook Email was the primary system used to manage all internal and external requests. There was no defined process and specific service level agreements. Two different contractors provided internal and external support.

NSF decided to consolidate both these IT support service agreements into one single contract. Prior to doing this, they wanted to establish a standardized business process with a single easy-to-use, enterprise-level solution platform supporting both internal and external IT requests. The main objective of this project was to develop and implement a standardized business process across both customer segments (Internal & External). After establishing the standardized process, the next step was to implement a supportive enterprise wide technology solution. Some of the core criteria for a successful solution included:

- Industry leading software platform that can be leveraged across the enterprise
- The solution should meet the unique requirements of both internal and external customers
- Extendable solution to support the process end points such as Point-of-origination to Point-of-Contact and Point-of-Contact to Point-of-resolution
- Effective and intuitive interface to capture, track and manage IT support requests
- Ability to define Service Level Agreements (SLA) within the system and drive accountability at all levels
- Central repository of all IT support requests regardless of the channel of communication
- The ability to provide real time and trending decision-making reports
- Increase overall customer satisfaction with IT support services.

## Our Solution

Optimos was awarded the contract to implement a solution meeting the above referenced program objectives. We decided to take a very structured results oriented phased approach to achieve NSF's goals. The program started with a detailed business-process definition stage based on a defined approach. An internal customer group was established to provide

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guidance, oversight, and approval during this stage of the program. Detailed information gathering sessions were conducted and business process maps were defined. These processes were then socialized with all stakeholders prior to final approval. Optimos facilitated complete customer involvement, ensuring the processes defined were accepted across the enterprise.

Upon acceptance of the business processes, Optimos mapped business requirements to the standard Siebel application and performed a fit-gap analysis. We then did a high-level design and built a prototype to demonstrate product functionality and capability. During this stage of the process, several demos were provided to gather end-user input and establish enterprise wide buy-in. Once the prototype was accepted, we moved on to the development stage of the project. The solution was developed based on vendor published configuration guidelines. A production environment hardware assessment was performed based on detailed systems architecture. The systems architecture was developed based on systems requirements, performance requirements, scalability requirements, existing OS and database standards, and solution flexibility to accommodate future requirements and growth. The architectural design was presented to the corresponding architectural personnel at NSF for approval.

In parallel to the development tasks, Optimos worked closely with another internal team to gather personnel data from another system that would then be migrated to the Siebel solution. This involved data analysis, data mapping, data cleansing and transformation, and finally loading to the Siebel base tables. Only sample data was loaded onto the development environment.

The developed solution was then migrated from the development environment to the Test environment for detailed testing. All data was migrated based on transformation and migration scripts tested in the development environment. Upon successful completion of unit testing, functional testing, and system testing, the solution was opened for user acceptance testing.

During this testing stage of the project, we prepared detailed training manuals for conducting end-user training. Training sessions were scheduled based on NSF staff availability. Upon successful completion of the end-user training and approval from UAT, the solution was deployed in the production environment. This was the first phase of the rollout strategy, supporting the internal customer base.

The next phase of the program followed the same systems development life cycle, adhering to strict quality controls following industry best practice implementation methodologies. This rollout was to support IT support requests from the external customer base.

Upon successful completion of these two phases, Optimos had established a foundational framework to ensure accountability across the enterprise. This platform could now be extended to support and leverage all future enhancements. Through both these phases, Optimos worked closely with NSF to capture and configure SLA standards. The system automatically flagged requests that did not meet the SLA requirements. The solution was also extended to end-users providing Tier II support. This enabled NSF to get a complete 360° view of all activities and support functions provided by the IT support services group. These two phases also provide the ability to automatically create IT support requests based on emails received to a central IT support services mailbox with assignment capability. This helped reduce the time spent by agents to manually enter Support requests and increased

overall response time. All communication channels except web were supported, such as phone, fax, email, and walk-ins.

The next phase of the project was to design and deploy a web-based interface to facilitate the creation and tracking of online IT support requests. The solution was designed and developed on the Siebel eService module extending the existing systems architecture. With this deployment, both internal and external customers can log their requests online and track resolution progress.

Once this phase of the project was completed, it was now time to focus on executive management, and mid management reporting capabilities. During these deployments, Optimos worked closely with NSF to define and establish the key management reports required to manage tasks efficiently. During the initial three phases of the project, the management reports were generated on excel sheets with custom SQLs and macros. Based on careful analysis, it was deemed necessary to implement a business intelligence solution to provide real time on-demand reports to users on their desks.

As a part of this project phase, Optimos designed, designed, and implemented a business intelligence solution based on OBIEE. This application is seamlessly integrated with the core system. It provides actionable information through in-depth analytical reports from the data warehouse and real time access to decision-ready data.

Over the last 5 years, Optimos has successfully upgraded the Siebel platform environment from version 7.0.4 to 7.5.2. We are currently in the process of upgrading to the latest version of 7.8.2. These phased solution rollouts, enhancement deployments and upgrades have had absolutely no impact on the day-to-day operations of the Service Support Department.

This solution platform enables the National Science Foundation to provide comprehensive customer service to both its internal customer (NSF employees) and external customers with clear visibility at all levels. The entire system is designed such that it can easily accommodate future process changes or additions.

Part of the Optimos solution also entails all Operations and Maintenance tasks of the Siebel application components. We are responsible for recommending hardware, software, and necessary tools required to meet uptime and compliance requirements. Optimos system administrators designed, and installed all necessary software components to create each environment. Each environment consists of the necessary operating systems, MSSQL Server database components, Sun One Web Server, Active Directory Server, Siebel Application Servers, Siebel Database Servers, Siebel remote file system access, Actuate reporting server components, and other necessary third party software required to support the system architecture. All are configured on highly redundant RAID hardware servers with systems architecture supporting load balancing and failover. Some components of the failover functionality are configured to support automatic failover while some require manual intervention. The production environment is configured and architected to support scalability, adaptability, and flexibility for future enhancements and upgrades.

Optimos is responsible for all maintenance related tasks such as certification and accreditation, patch maintenance, deployment of production enhancements and upgrades to the software components. Backups are structured based on NSF's requirements and have been performed regularly based on scheduled maintenance intervals. The solution is constantly monitored and there has been no unscheduled downtime during its entire tenure

of 5 years. Disaster recovery procedures are documented and tested in preparation of any unforeseen disaster.

From a security standpoint, Optimos systems administrators have been constantly monitoring all activities related to the solution platform. All government published security policies have been implemented to ensure necessary compliance.

In addition to system administration support, Optimos has been providing Tier II application support for all customer issues both internal and external. These issues are periodically analyzed and necessary permanent fixes have been deployed in the production environment. This has resulted in the overall reduction of Siebel application related support requests.

Our approach to performing operations and maintenance tasks, including application helpdesk support, has enabled us to provide a zero unscheduled downtime environment for over 5 years. The only downtime that the system experienced over its lifetime thus far has been during the deployment of new modules or functionality and during maintenance.

## **Conclusion**

Optimos has been able to accomplish NSF's primary objective: to develop and implement a standardized business process across both customer segments (internal and external).

The National Science Foundation has increased the overall customer satisfaction and confidence in its helpdesk operations. Empowered by the Siebel eBusiness application, NSF has streamlined operations and standardized industry best practices. Optimos' effectively configured the solution to ensure maximum productivity and efficiency within the helpdesk organization, and it now provides for accountability at all levels. A unified helpdesk solution that can proactively and effectively service the customer base is in place.