



## CASE STUDY

### **From Silos to Synergy:**

# Conversion of Subsystem-Based Processes into CGI-Based Web Interface: Enhancing Banking Efficiency



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# Introduction

The banking landscape is ever evolving, and banks must leverage technology, and streamline their operations to be competitive. Banks are now leveraging the benefits and are driven by the imperative of converting the subsystem-based processes into a CGI interface for businesses using IBM AS400, which will benefit the business in multiple ways.

At this onset, a leading bank in the UK with several branches across various parts of the globe, serving customers from various socio-economic backgrounds, wanted to enhance their business efficiency to succeed in today's rapidly changing landscape. Bank's clientele, it is inevitable for them to embrace intuitive business acumen and distinct solutions. They wanted to enhance their operations, bring customer satisfaction, and expedite their business process, including missed data / file exchange cutoff times, frequent connectivity issues during FTP transfers, potential transaction overlaps, and complex reconciliation procedures. They approached zetaRP to achieve process efficiency by overcoming their diverse challenges and delivering the ideal best service to their customers.

In this case study, we will evaluate various challenges faced by the bank and how their adoption of IBM AS400 gave them significant developments in their processes. With the partnership of zetaRP, the bank successfully upgraded its technical infrastructure, which brought an enhanced reputation and impacted its overall performance. The case study will also delve into the areas of specific benefits obtained through this transition along with how the bank's decision to leverage CGI technology and IBM AS400 has impacted positively their operations and has positioned them for their future success.





# Analysing the existing procedures and gaps in the bank

Our client (bank) has a growing customer base offering a diverse range of services. To cater to the growing clientele, and to exceed their expectations, led them to explore the adoption of a CGI interface, with an advent to bridge the gaps and improve their overall operational efficiency.

While comprehensively analysing their existing procedure by the expert team of zetaRP, we identified some key pain points. Along with that, we identified there is room for process improvements, that could bring overall process enhancements. As the subsystems operated in silos, which resulted in data inconsistencies and redundant processes. Also, manual workarounds including process delays were recorded.

In one of the instances, while analysing the customer onboarding process, we identified that the bank has multiple subsystems for identity verification, account opening, and KYC compliance. All these subsystems make the process completely fragmented and time-consuming process. Also, transaction processing which involves multiple subsystems requires manual intervention for reconciliation and data synchronisation. With an integrated approach, it can bring seamless data exchange, streamline processes, and enhance customer satisfaction.

It is to be noted that, the current subsystem-based process for debit card transactions in the bank suffers from several gaps and challenges, that would hinder its efficiency and effectiveness. These gaps include:

## **Missing file exchange cutoff time:**

The subsystem process lags to perform on the aspects of file exchange cutoff time, followed by delays and disruptions to the transaction flow.

## **Transaction overlaps between files:**

The system involves multiple file transfers where there is a possibility of transaction overlaps. This is leading to data inconsistencies and errors.

## **Reconciliation challenges:**

The process of reconciliation requires multiple request and response files. This makes the process both complex and time-consuming, increasing the risk of errors and mismatches during the reconciliation process.

## **Connectivity issues during file transfer:**

While transferring files through an FTP server, it frequently leads to connectivity issues, which causes further delays in the processing. This introduces uncertainties in the transaction flow.

Identified gaps





# The Solution we proposed

After going through extensive analysis, and understanding the areas of improvement, it is proposed to replace the existing batch process with a CGI solution. It involves creating a new HTTP-based interface at the AS400 server and implementing the necessary listening services to accommodate the existing business logics and functionalities.

This CGI interface solution resolves the identified issues as follows:

## **Elimination of missing cutoff time:**

Switching to the CGI-based web interface, there is no more scheduled subsystem, and the concept of cutoff time is eliminated. This enhances the Real-time data exchange between systems ensures instant processing and eliminates delays caused by missing cutoff times.

## **Prevention of transaction overlaps:**

With the advent of instant data exchange across systems with a standardised XML/JSON format, it eliminates the possibility of transaction overlaps. Along with that, it also ensures precise and stable data transmission.

## **Simplified reconciliation process:**

With an immediate response generation update, it allows real-time reconciliation of transactions. By responding to each request immediately, the reconciliation process is simplified, reducing the risk of errors, and improving efficiency.

## **Removal of FTP server dependency:**

Eliminating the need for an FTP server for file transfer, as the data exchange is performed directly using XML. It curbs connectivity issues and streamlines the file transfer process.

With an effective update, the bank can overcome the limitations of the existing subsystem-based process and enhance the efficiency, accuracy, and reliability of debit card transactions. The proposed solution not only resolves the identified gaps but also offers additional benefits such as real-time processing, improved reconciliation, reduced manual interventions and the dependency on external systems.



# Steps involved in conversion to CGI-based web interface

Implementing the CGI interface helps several processes of the banking system to interact seamlessly with their hosted web server and to avoid compatibility issues with modern applications. With a streamlined evaluation, the transition was carried out smoothly, identifying the goals of the transition, setting up the web server, and mapping the new subway system. The server should be configured with sufficient memory, disk space, and processor power to run the CGI scripts smoothly. This is followed by the process of hosting a web server, essential for the successful interaction with the CGI interface, with adequate memory, disk space, and processor power.

The main feature of the subsystem process, sharing resources while running separately from each other ensures that the jobs run independently. Moreover, the failures of one subsystem do not affect the other one. With a comprehensive process involving the goals of the bank regarding the upgrading to IBM AS400, it helps in setting priorities, enhancing system performance, improving user experience, and more.

While converting to CGI interface, we remapped the subsystem pathways and updated other system dependencies like job descriptions, data queues, user-defined subsystems, etc. These steps ensured that the subsystem pathways remain interconnected with the web server and that the new environment maintains system functionality.

After completing the implementation process, it is crucial to test the new CGI-based environment thoroughly. We did a comprehensive testing that includes verifying that the subsystems, jobs, and configurations work efficiently in tandem with the hosted web server. We did prompt troubleshooting to identify any issues and confirmed that the interface works as expected.





# Results obtained by the bank from this CGI-based web interface

The bank switched from its subsystem-based processes to a CGI interface solution to fix these gaps. The CGI would act as a centralised gateway, facilitating real-time data exchange and integration between various subsystems.

By analysing its existing procedures, identifying gaps, and embracing the CGI interface solution, the Bank was able to drive significant improvements in its operations. This transition empowered the bank to enhance integration, streamline processes, improve data integrity, and deliver an exceptional customer experience. As a result, the Bank was well-positioned to achieve sustainable growth, remain competitive, and meet the evolving needs of its customers in the UK banking market.



## **Enhanced integrity and Efficiency:**

The CGI interface enabled smooth communication and interoperability between subsystems. This solution eliminated data silos, minimised manual interventions, and reduced the risk of errors or discrepancies, leading to improved operational efficiency.

## **Streamlined Operations:**

With the CGI interface, The bank now has unified customer onboarding process. Instead of navigating through multiple subsystems, the bank is able to seamlessly verify customer identities, open accounts, and complete KYC requirements in a more efficient and streamlined manner, ensuring a better customer experience.



## **Real-time Transaction Processing:**

The CGI interface enabled real-time data exchange between subsystems, allowing for immediate transaction processing and accurate reconciliation. This real-time processing reduced the reliance on manual interventions, improved transaction turnaround time, and enhanced the overall reliability of the banking services.





# Results obtained by the bank from this CGI-based web interface

## Improved Data Integrity and Security:

With the advent of Data centralisation, the Bank was able to establish standardised data formats and was able to enforce consecutive security measures. As a result, the data integrity, mitigating the risk of data breaches was made possible, while ensuring compliance with regulatory requirements. Overall, it bolsters reputation along with trustworthiness.



## Scalability For Future Growth:

With a scalable foundation for future growth rendered by the CGI, the bank can expand its services and communicate with any new system. Given the limitless possibilities, the bank would ensure agility, bring newer adaptability, and enable changes seamlessly, in a rapidly evolving banking landscape.

## Cost and Time Savings:

Converting subsystem-based processes into a CGI interface can result in cost and time savings for banks. The standardisation and integration achieved through the CGI interface reduce the need for custom integrations, complex data mappings, and maintenance efforts. It simplifies the development, deployment, and maintenance processes, allowing banks to allocate their resources more efficiently and focus on delivering value-added services to their customers.





# Empowering Futuristic Progress and Competitive Success of Banks through zetaRP

The transformation from subsystem to CGI can be one of the intriguing processes but is highly crucial to elevate the bank to the next level. Mapping out the subsystem pathways and testing the pristine environment is critical for making the transition a smooth and successful process in the IBM AS400 environment. Post implementation, the Bank was able to reap several benefits. Penetrating new markets by transcending geographies has helped the bank to position itself among its competitors and expedite the processes.

By embracing this innovative approach, the bank aims to stay ahead of the competition and achieve greater operational success in the dynamic banking industry. The transformation has enhanced accessibility and fostered personalised customer experience. With a streamlined operation, and enhanced security measures, it promotes data-driven decision-making along with driving innovation that would leverage newer capacities for the bank, adding efficiency, agility, and ability to deliver high-quality services to its customers.

zetaRP, through our years of experience, we serve diverse clients across the banking and finance sector, deliver exceptional results, and empower several organisations through futuristic solutions. Partnering with zetaRP helps banks to position themselves as industry leaders, where they can drive growth, and stay ahead in the evolving FinTech landscape.

Whether you are looking to enhance your IT infrastructure, implement cutting-edge technologies, or streamline your processes, consider [zetaRP as your strategic IT partner](#) to elevate your business to new heights.





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