

# KMG AS/400 Web Enabling Case Study



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*Fostering Partnerships*





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### Why KMG?

- Exceptional Customer Retention
- Valuing its people
- Rich experience across industry domains in US and India
- Highly skilled in-house Business Analysts / Domain Specialists / Software Engineers
- Consultative approach with clients
- Experienced Management team
- Open, consultative management style
- State of the art infrastructure

## Client Overview

Our Client is a Physician Services Organization that provides a suite of services to aid physicians in collecting payment for the services they provide. Their goal is to act in partnership with physician office to alleviate the administrative burden and worries surrounding revenue collection. Solutions are tailored to Physician Services, Hospital Based Services and Billing Companies.

Their most comprehensive package includes billing and practice management solution. This gives their clients the comfort of knowing all aspects of their accounts receivable that are being managed by Client's experienced staff, from charge entry to reimbursement processing to patient calls and follow-up.

Client's services bundle comprises of:

- Scheduling/Front Office Package
- Interactive Provider Participation System
- EDI Submission & Maintenance
- Email or Text Practice Management Information
- Complete Practice Management Reporting
- Software Support
- Hardware, Data Security & Backup System
- Compliance
- Transitional A/R Management Services
- Ancillary Services like Payer Credentialing Services, Custom Programs and Reports, Prior A/R conversion and collection, Automated Appointment Reminder Calls, Email or Text Message
- EMR / EHR Interface
- Hospital System Interface



### Current Technology Setup

- AS/400
- RPG2
- Legacy PMS system - MedPRIME
- Application built on SaaS model.

### Proposed Technology

- AS/400 (System i)
- RPG
- DB2/400
- J2EE, JSP
- JT400
- Java Script
- WebSphere Application Server
- WDSi (WebSphere Development Studio Client for iSeries)
- Web Services
- SOA

## Challenges

Client's IT staff busy in fulfilling customer needs of report generation, Adhoc queries etc. They were not able to focus on other IT initiatives.

A desire to move to modern technologies and enhance the existing setup.

Another major challenge faced was project backlogs. The planned projects were put in the pipeline but never executed.

## Wish List

Client wanted KMG services support in following areas:

- Application Maintenance coupled with Production Support
- Standardization of Interfaces for initial client setup (ETL Tool)
- Selection of Modern Technologies considering IT budgets
- Web enabled of legacy application in minimum time
- New application enhancements
- Supporting other short duration projects related to data encryption and web services

## KMG Solution

Senior IT consultant deputed at Client site to understand key business areas where client wanted to concentrate to enhance customer experience and increase profitability. Short to long term goals were identified and pending business enhancements were prioritized.

A complete future IT road map along with high level system architecture was proposed to the client. The plan was divided into multiple phases taking the business goals into consideration.

### Phase 1 Addressed

Short term goals of maintaining and enhancing existing legacy application to achieve maximum business functionality.

Standardization of Interfaces for new and existing clients by using ETL tools. This helped in reducing on board time for bringing new clients to start using client services.

### Phase 2 addressed

Mid Term goals of going for GUI based solution by using modern technologies. This includes migration from legacy to web based.

### Phase 3 addressed

Long term goal of going for Portal Design and Data Warehousing in order to use Business Intelligence tools for rich client experience.

The project uses onsite offshore model. One onsite coordinator is placed client side and rest of the team operates from India.



## What is Web Enabling?

- Your green-screen applications running on the Internet
- Transform your 5250 applications into GUI browser-based applications
- Enhance the applications with existing skills and tools
- Applications accessible from anywhere
- Customized web pages
- Use the iSeries for business logic and database and move all user interface to the web

## Web Enabling Framework

Client was using PMS application (MEDPRIME) on AS400 Technologies having Green Screens as User Interface. It has 3 major modules that include Appointment Scheduling, Billing and Reporting. The application is built around SaaS model to serve multiple clients.

Client was looking to modernize the current application and go web way.

### Client Concerns

Following were the top concerns of client's top management:

- Cost of Application Modernization should be within budgets.
- License cost should not be exorbitant
- Client monitors project progress and ensure that the expectations are met.
- Software warranties should be provided.
- How would KMG understand the existing application and how effective would be its conversion to the modern technology?

### KMG resolutions

We provided following resolutions to our client's concern:

- KMG provides very competitive pricing as compared to its competitors! Our Technology Solution Frameworks are designed in a way to keep the cost low.
- Usage and customization of open source software's / tools (Community Version's) available to the business needs ensures cutting down of costs in terms of licensing.
- KMG uses Agile Methodologies in project delivery process that ensures client expectations are met all the way down the line.
- 100% software warranties are provided before they come into AMC cycle.
- KMG through its vast experience understands that there are millions of code written into client's legacy applications over decades and thus ensures that it is effectively converted into Modern Technology.



### Framework Advantages

- Cost Saver since there is no rewrite.
- Reduced development time and effort.
- Almost no learning curve required by developer.
- Zero Chances of losing existing functionality
- Solution based on Service Oriented Architecture (Using Web Services)
- Framework loosely coupled, flexible and scalable
- Architecture still uses best of AS/400 features like security, processor speed etc
- Enhanced End User experience (Rich Client)
- Phase wise deliveries possible
- Existing team expertise / knowledge remains
- Minimum hardware / software requirements
- Future developments can be done on Modern Technologies
- Web services offer a wide choice of possible user interfaces.
- Web services can be invoked by multiple client technologies, such as Web, mobile, and desktop applications.

### Available Approach options

There are 3 ways of achieving Web enabling:

#### Complete Rewrite

If one has to convert the entire code to newer technologies it may turn out to be a gigantic effort. Efforts are required to understand client business, functional aspects of the application and profound technical understanding. It requires complete code rewrite, exhaustive end to end testing, data conversion, running the systems in parallel and so on. Finally, it may not turn out to be a value add proposition and may take away a large chunk of IT budgets.

#### Using Web Facing Tool

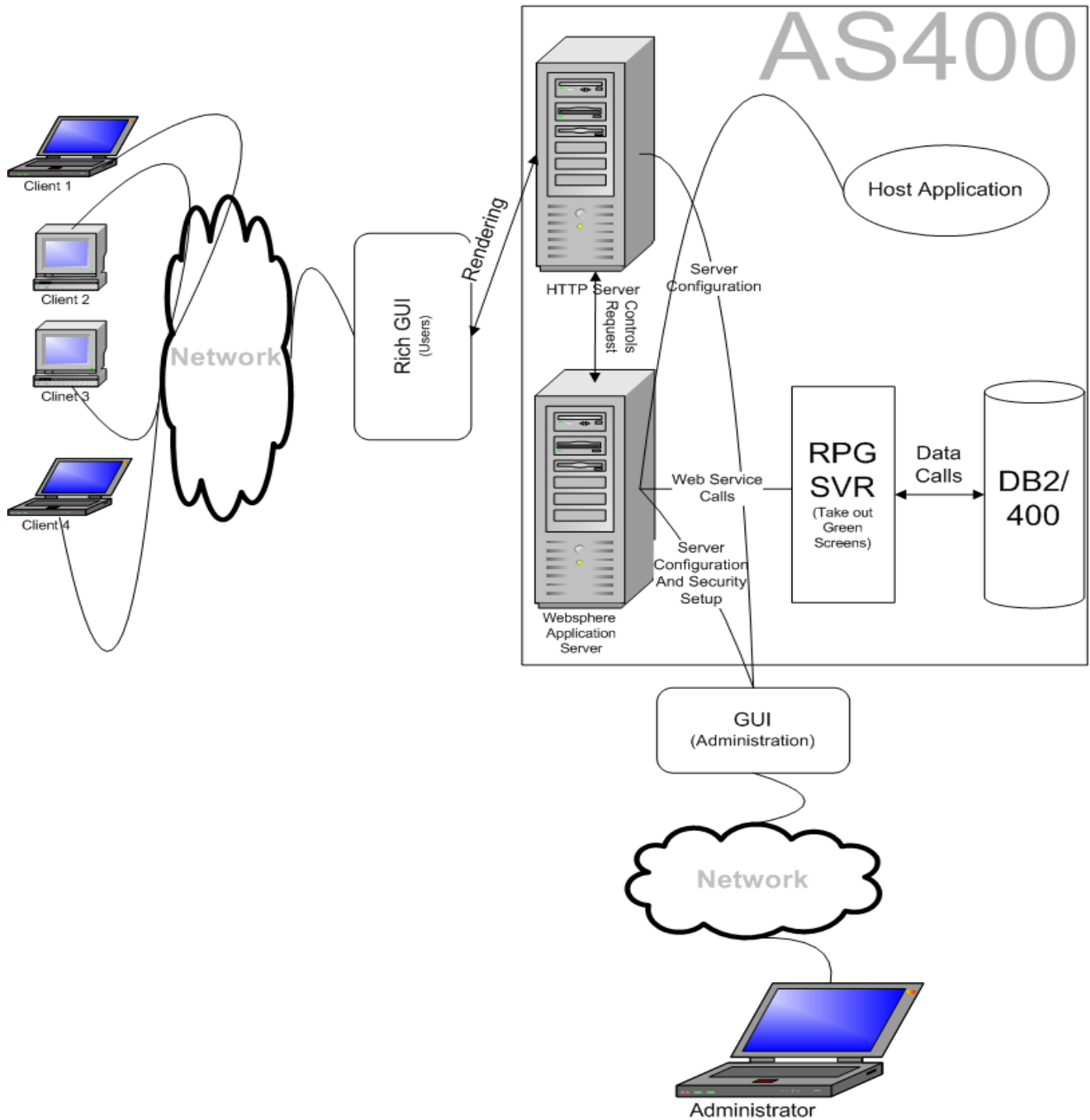
It may result in compromise in terms of look and feel, desired functionality (over and above existing one) and may result into multiple testing iterations. Resulting application may not be scalable or flexible because of tight bonding between UI and business logic. Plenty of proprietary code makes it difficult to maintain. Tool based approach may not bring ROI in long term.

#### KMG Recommended Approach

Following approach is used by KMG to convert legacy application (AS400) to Web Based (Browser Based) Application:

- Existing Green Screens are converted into GUI based screens (Front End).
- Display File related code is taken out from RPG / COBOL
- Minor validations are done at Front End that includes Format Check, Mandatory Field Check etc. This ensures filtered data to be processed by backend programs.
- Programs (RPG / COBOL) are parameterized and only business logic stays. This requires non complex changes in applicable programs.
- Front End makes Web Service Calls which further calls RPG / COBOL Programs to access / process data
- Web based application can be installed on AS/400 itself provided Application Server (Web-Sphere in most of the cases) is installed. This also retains AS/400 advantage. Though web based application can be installed on any other Application Server outside the AS/400.
- Database remains on AS/400 server.

## Framework





KMG Advantages

- In the business for 20+ years
- Vast experience and skills around iSeries technology.
- Unrivalled iSeries competency makes us your strategic partner for all your technology needs.
- Around 60 iSeries consultants, with 180 person years of experience in designing, developing and maintaining iSeries built applications.
- iSeries team comprises of Delivery Managers, Project Managers, Team Leaders, Architects and Developers.
- From working on standalone iSeries technology to connecting Java application and iSeries using WebSphere Application server and related tools & technology.
- Extensive experience in application management and delivery functions across industries like - Insurance, Manufacturing, Financial Services, Retail and Healthcare.

About KMG

KMG is a global software development, application maintenance and BPO operations company, which provides premium IT solutions worldwide using Microsoft, IBM & Java Technologies. In a wide-open sea of countless software development companies, KMG distinguishes itself as a company driven by excellence.

KMG was established in 1990 and is among Top 10 fastest growing Indian-owned companies in the US. It is also rated among top 50 software companies in India. It has a Dun & Bradstreet rating of "Good- 2A1".

KMG's onsite-offshore model and industry expertise enables the company to enter into long-term, mutually beneficial strategic partnerships with many Fortune 500 companies. Unlike most other Indian-based software services firms, KMG maintains a large development team in the US. This team is used to interact with the client & provide a longer overlap to the users.

KMG has its headquarters in New York with 4 Offshore Development Centers in India (Gurgaon, Bengaluru, Mohali and Kolkata) and a sales and development center in New York.

KMG has around 60 professionals in the US supported by another 250 in India. KMG has resource expertise that covers Microsoft.NET technologies, Java J2EE, Mainframe, IBM iSeries (AS/400) and Software Testing.

