The use of technology to enhance the supply chain process within operations departments

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Abstract

The purpose of this study is to provide a basis for upgrading and strengthening EDI capabilities by meeting specific and phased goals. Its primary objective is to replace the traditional SeeBeyond translation tool used for MaSys EDI processing. This aim needs to be successfully achieved before W&F starts the SeeBeyond contract extension process after the latter's expiry, which puts a hard deadline for our study. The replacement of SeeBeyond needs to be done as simply and cleanly as possible so as to minimize potential disruptions and changes to the MaSys application. Another objective of our BRDis to retrofit QUE to potentially use the new translation tool (project scope and timing to be approved). This is intended to reduce the programming effort to configure and maintain EDI processing in QUE, and also to standardize Integra's EDI translation processing to a single platform. We also envision, through our project, to upgrade QUE's business process and technology capabilities such that providers can submit claims via EDI to Integra (project scope and timing to be approved). This will significantly improve the service to providers by removing both duplicate keying and process friction. Since the primary focus of this project is the replacement of SeeBeyond for MaSys EDI, we have undertaken a thorough process of evaluating alternative products during February and March 2016. After extensive research, we have decided to select Edifecs which is also used by Tufts Health Plan (THP).

INTRODUCTION

Dynamic partnerships as well as various processes management constitute severe roadblocks in the eBusiness domain. Enterprises and their trading partners are frequently exposed to the complexity of managing various component applications and catering for bespoke software requirements. Additionally, the aforementioned parties need to agree on specific standards relating to security and data exchange**[31]**. The SeeBeyondeBusiness Integration application has proven its efficiency and usefulness in this process over the past few years. Indeed, its major purpose was to combine Enterprise Application Integration (EAI) and Business-to-Business (B2B) into an integrated eBusiness product suite that provides major technological advancements in the eBusiness domain. Those vary from allowing companies to leverage their existing applications and technology, to the rapid implementation of standard business protocols in the industry. However, due to the fast technological advancements companies have submerged in, SeeBeyond was starting to develop serious operational constraints, which created the need for a faster and more efficient eBusiness Integration application.

After thorough research, we have decided to select Edifecs as a replacement tool for SeeBeyond. This new design-time tool is an easy-to-use and integrated application that streamlines distinct aspects of transaction processing. Edifecs is characterised by a library comprising more than 30,000 trade specifications, and is reputed for costs reduction,

streamlined processing and facilitated specification definition. Additionally, this tool enforces business policy and delivers dependable transaction flow route maps. With Edifecs, every organisation benefits from reliable specifications, reduced development and integration time and improved operational efficiency and data governance **[32]**.

The purpose of this study is toreplace the traditional SeeBeyond translation tool used for MaSys EDI processing with the ground-breaking Edifecs, which efficiently circumvents the constraints encountered by the previous implementation.

METHODOLOGY

A study was conducted on the replacement of the SeeBeyondeBusiness Integration application with Edifecs by thoroughly analysing the different steps to be undertaken in order to cater for the proprietary project requirements.

Part of the methodology followed to implement this new project is to limit the amount of change required to MaSysto avoid its disruption. This helps avoid diverting resources from HCSC and other BM program preparation, which requires maintaining the separation of mapping rules in Edifecs and business logic/validation rules in MaSys as in the current process.

Additionally, as we implement Edifecs, we will be positioning Integra EDI for continued growth and capability. This requires to work through ongoing roles and responsibilities for supporting the new tools and for determining who will drive the next phases of EDI improvement at Integra. It also calls for the review and identification of ongoing opportunities to improve the current SeeBeyond EDI processes beyond only implementing Edifecs. As detailed in this BRD, the existing processes for receiving and managing files to be processed by SeeBeyond require significant manual intervention. Opportunities to improve these processes, both with Edifecs and other tools, will be assessed and documented for implementation.

Subsequently, we will prepare the architecture, design, configure and deploy new Edifecs products (XES, SpecBuilder and MapBuilder). We will then develop, test and implement mapping functionality to replace SeeBeyond. This will be followed by a mapping conversion to comply with existing processing structures and protocols such that MaSys processing is not impacted. The Edifecs knowledge will then be transferred to the EDI team to enable future support and create companion guides for active EDI transactions. Furthermore, we will work with W&F to decommission SeeBeyond and archive Integra data appropriately. The final step towards the successful achievement of this scope will be performed by Edifecs services team who will work on the design and development of the project.

RESULTS

Our study sought to push the public domain knowledge by replacing the traditionally used SeeBeyondsoftware by the unique Edifecs. Consequently, we conducted extensive research that helped us reach valuable results regarding the different steps and techniques to be used to achieve this bespoke project.

Indeed, we have found that the initial replacement of SeeBeyond should be performed as simply and cleanly as possible to minimize disruption and change to the MaSys application.Therefore, no (or only minimum necessary/unavoidable) changes should be made

to edit levels, rules and processing framework. Longer-term, ongoing improvement to the EDI process will be possible, but will be covered under separate projects/initiatives, as detailed in earlier sections.Also, the solution should be further enhanced by including the 5010A1 X12 files version which is currently used for the Health Insurance Portability and Accountability Act (HIPAA) electronic transaction standards for health care professionals and suppliers**[33]**.

The results of our study have also shown that the current Edifecs process includes a number of inefficiencies and opportunities for improvement. For instance, current processes for pushing/pulling files, running programs and producing outputs or reports is manual and labor intensive. This creates many opportunities to improve efficiency, employee and customer satisfaction. Also, there are currently very limited compliance checks on inbound and outbound files, which produces a higher than necessary error rate in downstream processing. This in turn creates the need to look for opportunities to reduce labour and postage costs, and improve customer relations.

In order to effectively circumvent the aforementioned limitations, the new business process will replace steps that send to and deliver files from SeeBeyond with steps to send to and deliver files from Edifecs. Generic process steps are as follows:

• Setup of all current trading partners (see matrix below)

• Intake of the X12 5010 834 Inbound transactions

• Intake of the X12 5010 837P Inbound transactions

• Intake of the outbound PFF remit files

• Intake of the outbound PFF claims files

• Transform X12 5010 to PFF

• Transform PFF to X12 5010

• Apply std HIPAA X12 5010A1 compliance rules (Snip 1-6)

• Split files into Good and Bad

• Deliver enhanced good transactions file to Edifecs drop zone

• Archival

• Acknowledgments

In addition to the aforementioned steps, a proposed process will be designed and reviewed during the architecture and design phase of the process. Changes to this current process can be considered where merited, but only if they avoid significant disruption which will extend/threaten the set timelines. Our study envisions to provide a balance between short-term improvements in efficiency and quality which can be delivered for go-live, but which do not require changes to MaSys or other process components; and longer-term improvements to the process which can be phased-in once SeeBeyond is successfully replaced.

DISCUSSION

Our study concluded that the successful replacement of SeeBeyond by Edifecswould engender significant improvements in terms of performance, cost reduction, streamlined processing and facilitated specification definition. A similar conclusion could be found on the official Edifecs website where it is stated that this new tool "helps companies more efficiently exchange business data such as purchase orders, invoices, shipment notices, agreement terms, payment files, merchandise and many others"**[34]**. Additionally, Edifecs helps significantly reduce costs incurred by organizations through a large variety of means. This makes it possible to effectively implement and maintain a development guide, establish communication with trading partners and finally test for compliance in internal and customer data files.

The study we conducted throughout this research project also enabled us to distinguish the proprietary features that make Edifecsstand out for its high efficiency and unique capabilities. This claim is supported by a wide variety of resources all sharing the same view. Indeed, Edifecs products, namely Specbuilder, are industry-leading tools comprising over 30,000 pre-established guideline templates. Furthermore, they offer bespoke solutions to common problems relating to the testing, design and run-time execution. Their capabilities were further enhanced by significantly reducing implementation and maintenance costs, making it easier to reverse engineer specifications from data files using the SpecGenerator product**[34]**.

Edifecs extends its unprecedented benefits to the health care market with its Transaction Management version which is compliant with HIPAA standards. Indeed, this novel solution leverages pre-established templates for scenarios related to transaction processing. Furthermore, it provides an end-to-end and secure view of the transaction lifecycle in the healthcare domain to both trading partners and internal users. This enhances decision-making procedures, claims first-pass rates and customer satisfaction**[35]**.

With the aforementioned functionalities, Edifecs allows operations and customer support staff to appreciably analyse Service Level Agreements (SLAs) with the use of reports and visual dashboards **[35]**.Also, a key technological advancement achieved by the selected innovative tool is its adoption of Electronic Medical Record (EMR)connectivity, which appreciably enhances provider quality, efficiency and accountability. As stated in an official document published by the product owners:"Edifecs is uniquely suited to support EMR requirements; its trading platform facilitates information exchange in a trusted, transparent andcompliant manner"**[36]**.

CONCLUSION

The cited resources provide a strong basis for our study since they support our claim stating that Edifecs pushes the boundaries of the current state of the art (namely SeeBeyond), and offers appreciable enhancements to the latter. Indeed, the novel solution we selected is characterised by its unique performance features, reliability, robustness and ease of use compared to other products used for the same purposes.

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