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# Retain Existing Business Process with the 3rd Party Supplier

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**Retain Existing Business Process with the 3<sup>rd</sup> Party Supplier**

by

Gupta Swati

A Starred Paper

Submitted to the Graduate Faculty of

St. Cloud State University

in Partial Fulfillment of the Requirements

for the Degree

Masters of Engineering Management

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Starred Paper Committee:  
Ben Baliga, Chairperson  
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### **Abstract**

Conveo was XYZ's partner and announced its intension to disengage from the partnership. XYZ made a decision to change its partner from Conveo to CGX for print and order fulfillment of their marketing materials.

XYZ self-accessed the sales tax with Conveo and provided Conveo a MN direct pay permit so Conveo had the proper documentation to omit sales tax from the invoices sent to XYZ. The business process described above was intended to be leveraged with the transition to CGX. During the transition of suppliers from Conveo to CGX, CGX was purchased by RRD, which is also a 3rd party business supplier of XYZ. The existing business process between XYZ and RRD for print materials, warehouse inventory, and order fulfillment services does not utilize the direct pay permit for tax.

Since XYZ was not allowed to have two different processes of applying sales tax with a single supplier, there was a need to have a consistent process. A decision was made to discontinue using the MN direct pay permit with RRD.

The intent of the project is to implement a standard process for calculating sales tax for the print, order fulfillment, and related services of marketing and verify the results by doing extensive testing using Quality Center Testing includes vendor's sales tax assessment for all activity completed for XYZ. The objective of the testing is to ensure XYZ's "approved" business and system requirements have been satisfied through the combination of various application interactions and business processes.

### **Acknowledgement**

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## **Chapter 1: Introduction**

### **Introduction**

The purpose of this project is to retain the organization's existing business process with the new 3rd party business supplier and verify the results by doing extensive testing using Quality center. Project is concentrated on implementing a standard process for calculating sales tax for the print, order fulfillment, and related services of marketing materials. Quality Center is used as a tool to capture the business requirements, user requirements, test Scripts, defects and to provide traceability from user requirements to business requirements & test scripts to user requirements.

### **Problem Statement**

Conveo was XYZ's partner and announced its intension to disengage from the partnership. XYZ made a decision to change its partner from Conveo to CGX for print and order fulfillment of their marketing materials.

XYZ self-accessed the sales tax with Conveo for print and order fulfillment of their marketing materials. XYZ provided Cenvéo a MN direct pay permit so Cenvéo had the proper documentation to omit sales tax from the invoices sent to XYZ.

The business process described above was intended to be leveraged with the transition to CGX. During the transition of suppliers from Cenvéo to CGX, CGX was purchased by RRD, which is also a 3rd party business supplier of XYZ. The existing business process between XYZ and RRD for print materials, warehouse inventory, and order fulfillment services does not utilize the direct pay permit for tax.

Since XYZ was not allowed to have two different processes of applying sales tax with a single supplier, there was a need to have a consistent process. A decision was made to discontinue using the MN direct pay permit with RRD.

The intent of the project is to implement a standard process with RRD for calculating sales tax for the print, order fulfillment, and related services of marketing materials no later than 01/31/2016.

### **Nature and Significance of the Problem**

Having two different methods for calculating tax with a single supplier would result in system inconsistencies. So there was a need to use one synchronized process for calculating tax.

### **Objective of the Project**

The objective of the project is to implement a standard process for calculating sales tax for the print, order fulfillment, and related services of marketing materials and verify the results by doing extensive testing using Quality Center.

Testing includes vendor's sales tax assessment for all activity completed for XYZ. The objective of the testing is to ensure XYZ's "approved" business and system requirements have been satisfied through the combination of various application interactions and business processes.

### **Project Questions**

The following questions will be answered at the end of this study:

- How should these changes be introduced so as to most effectively leverage departmental/organizational strengths, weaknesses, and culture?

- How many cycles of testing will be required to capture results?
- Which business applications will be affected?
- What is the current process for calculating tax?
- What are the different types of testing that will be required to capture information flow?

### **Assumptions**

Business and vendor subject matter experts' availability will not be an obstacle to eliciting business requirements, identifying and solving for gaps, and developing or executing the transition plan.

### **Definition of Terms**

**Element:** An element is an individual unit of code that comprises the application.

**Unit Testing:** A series of tests that examine the smallest new or modified individual units of a system. A unit test is also called a module test because individual units of code that comprise the application are also known as programs or modules (Schulmeyer, 2007).

**Vendor QA Testing:** A series of tests performed by the vendor in the E2 environment which entails complete functional testing prior to turning the environment over to XYZ (Horch, 2003).

**System Integration Testing:** System Integration testing is a series of tests that verify that all components and modules that form a complete application work appropriately together to deliver the application's required functionality and fulfill

non-functional requirements. The integration testing is a series of tests that examine a group of immediately neighboring units within a single system to make sure they communicate correctly and work together as a group. A group of related units is known as a component of a system. A system is divided into components that in turn are made up of units or modules (Horch, 2003).

**User Acceptance Testing:** A series of tests conducted by the business users of the new or changed application to confirm that the system delivers required functionality and newly defined business processes satisfy the business needs.

**JAD (Joint Application Development)** is a methodology that involves the client or end user in the design and development of an application, through a succession of collaborative workshops called JAD sessions.

**RAID log:** Risks, Assumptions, Issues and Dependencies log: It is a tool to track anything impacting your project now or in the future. Log is kept up-to-date through weekly reviews and team meetings. The log includes descriptions of each issue, its impact, its seriousness and actions needed to contain and remove it (Weinberg, 1997).

## **Summary**

In this chapter nature and significance of the problem, objective of the project and definition of the terms were discussed. Background related to the problem, literature related to the problem and methodology used for implementing the project will be discussed in the next chapter.

## **Chapter 2: Background and Review of Literature**

### **Introduction**

This chapter outlines the description of the company and the background related to the problem. It further describes the methodology used to analyze the problem and approach followed for the work to be completed.

### **Background and Literature Related to the Problem**

XYZ is a global financial leader. XYZ has been helping millions of clients invest towards their financial goals and dreams.

Conveo was a key XYZ outsourced partner and announced its intention to disengage from this partnership. As a result, XYZ made a decision to change suppliers from 3rd party vendor to CGX for print and order fulfillment of their marketing materials.

Conveo Background: In the business relationship with Conveo, XYZ purchased the print materials from Conveo and stored them in the Conveo warehouses. In addition to printing the materials and managing this inventory, they held inventory from third parties within their warehouse. Conveo also performed an order fulfillment and distribution of these materials, sometime in the future, based on requests of sales reps and independent advisors. Since XYZ didn't know the final destination of the materials at the time of purchase, XYZ self-accessed the sales tax on these materials at the time of purchase based on allocation methodologies. In addition, XYZ self-accessed sales tax on the inventory warehousing fees and order fulfillment fees based on these same allocation methodologies. XYZ provided

Cenveo a MN direct pay permit so Cenveo had the proper documentation to omit sales tax the invoices to XYZ for the print materials, Inventory warehousing fees, or order fulfillment fees.

In this business process XYZ owned the inventory that was stored in the Cenveo warehouse. Cenveo provided detailed files to XYZ that were used in various systems that distributed charges to the proper departments based on employee, or advisor, who requested the material to be distribution. These detailed files were also used by the commissions systems to adjust advisor commissions for sales tax and other fees based on who requested the materials to be distributed. There are a number of business systems and processes designed to support this business model.

CGX Background: The business process described above was intended to be leveraged with the transition to CGX. However, during the transition of suppliers from Cenveo to CGX, CGX was purchased by RRD, which is also a 3rd party business supplier of XYZ. The existing business process between XYZ and RRD for print materials, warehouse inventory, and order fulfillment services does not utilize the direct pay permit for tax.

Since XYZ was not allowed to have two different processes of applying sales tax with a single supplier, a consistent process must be applied. A decision was made to discontinue using the MN direct pay permit with RRD and implement a standard process for calculating sales tax for the print, order fulfillment, and related services of marketing materials no later than 01/31/2016

## **Literature Related to Methodology**

The approach reviewed each business process within the scope of the project and documented the current process. Reviewed the business processes with the XYZ and RRD team to fully understand the business process of taxable products and services. The RRD team presented the current process of calculating sales tax on products and services within the scope of this project. The XYZ tax team documented the current services performed and documented the details behind the taxable activity.

The business team SME's reviewed in detail each of the business process flows and identified each taxable service and event. In addition, the team documented the detailed business requirements for each of the business process flows and the related tax services within each business process. These business requirements and specifications were shared with the XYZ business and technical team as well as shared with the RRD technology team.

The XYZ technology teams used the business requirements to determine the technical requirements and drafted the technical solutions to bridge the GAP from the current and future process. Test Plan and Test Execution Plans were created.

Test Planning: Identified test stages and conditions from the user requirements and system requirements which were used as the foundation for the verification testing. Deliverables from this phase were:

- Test Plan
- Test Design Specification for each test stage

- Test Cases and Test Scripts
- Traceability back to requirements

Test Execution: Execution of the overall Test Plan, by test stage, included verification of expected results compared to actual results, documentation of defects encountered while executing tests, and the corresponding re-testing. Deliverables from this phase were:

- Completed test cases with actual results
- Test Defect Report
- Deferred Defect Log and Their Ultimate Disposition
- Testing Summary Report

The RRD business and technology team also reviewed the XYZ business requirements and collaborated with the XYZ technology team to reach a solution to bridge the GAP. The primary focus was to provide a systemic solution that will minimize the impact on the current information exchange, and enhance the information exchange to the level of detail to support the sales tax transaction needs.



Table 2.1: Milestones Identified for the Project

Milestones	Description
Approved - Project Charter	This was a formal document which describes the project at a high level, formally authorizes the project, and provides the Project Manager with the authority to allocate resources.
High Level Requirements	Documentation of the specifications to bridge the GAP from the Use tax model to the Sales Tax Model
Process Design	
Technical Design	
Technical Development	
Training	Trained SME on the process changes
Testing 7 Cycles	Final Testing Cycle.
Project Go live	Implemented the changes of the new sales tax process.
Post Go Live	Post go live support for both the IT and process changes (45 Days)
Project final closing	The process to complete the final analysis and review of the project deliverables to either transfer to Operations, the closed activities or extend work to a new project.

## Summary

In this chapter, literature related to the problem, study and methodology used were discussed. Framework of the study, data collection process, techniques used to analyze the data will be discussed in the next chapters.

## Chapter 3: Methodology

### Introduction

This chapter provides a detailed description of techniques used for data collection and analysis and the necessary actions taken to improve the efficiency.

### Design of Study

Project is carried out in 5 steps and briefly they are like

- Analysis–current state “As Is”, Gap Analysis with POA Vendors, Business Requirements, System Requirements
- Design
- Build
- Test
- Implementation

### Data Collection

The data was collected for each of the actions described below:

1. Gathered the details of the processes, systems, and data exchanges provided within the automated and non-automated interfaces (flow of information or physical materials) POD
2. Determined the RRD deliverables of the current process and how they plan to transition to the new process
3. Drafted XYZ’s future process through business requirements
4. Closed gaps between as is process and the to be process with tools and XYZ’s business requirements

5. Designed and developed any process and systemic changes needed to support the new sales tax process.
  6. Evaluated the full impact of this change to business process and the cost impact.
  7. Tested the planned solutions in a controlled test environment.
  8. Planned transition of the current process and determine any one-time transition impact/costs and mitigate the transition risks
  9. Executed the process transition conversion
- Communication Plan was created for data collection to be successful.

Communications Plan – Overview Draft



Figure 3.1: Communication Plan

Different test stages were identified for carrying out the process:

### Overview of test stages.

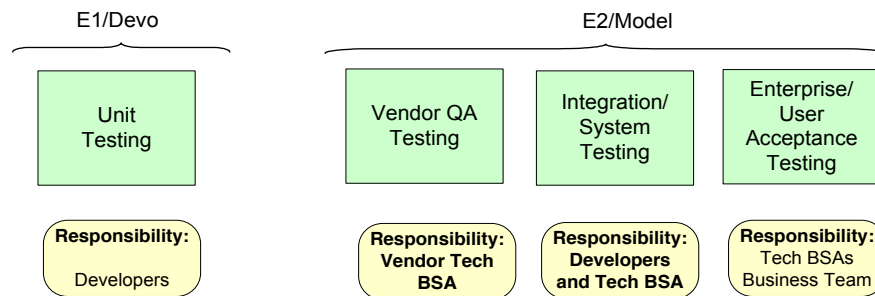


Figure 3.2: Test Stages

**Test techniques.** The following test techniques were performed:

- Boundary-Value Analysis**—Test data for this technique are chosen such that each edge of the equivalence class is the subject of a test case. If the input condition specifies a range of values, test cases are developed for the end of the range, and “invalid-input” test cases are developed for situations just beyond the ends. If the input condition specifies a number of values, test cases are developed for the minimum value, for the maximum value, for one below the minimum value and for one above the maximum value.
- Component**—A technique used to ensure related modules or units (that form a component) perform satisfactorily as a group.
- Error exit**—A method of ensuring that the input of invalid data or attempts to perform unfit procedures result in a clean exit with an appropriate error message. An example of a test may be attempting to open a file that does

not exist on the drive and checking whether the system crashes or whether it exits and an error message displays.

- **Functional**—A form of Black-Box Testing that bases its test cases on the specifications of the software component under examination. Functional Testing covers most of the System Testing stage and involves identification of differences between test results and test design documents. Functional Testing may also employ Equivalence Partitioning and Boundary-Value Analysis techniques. Functional Testing typically involves five steps:
  - The identification of functions that the software is expected to perform.
  - The creation of input data based on the function's specifications.
  - The determination of output based on the function's specifications.
  - The execution of the test case.
  - The comparison of actual and expected outputs.
- **Integration**—An examination of all the components and modules that are new, changed, affected by a change, or needed to form a complete system. Integration Testing also examines interfaces with other applications, including those owned by an outside vendor, external partners, or the customer. When a defect is discovered during Integration Testing, not all previously executed tests have to be rerun after the repair is made. Rather, only those tests with a connection to the defect must be rerun. However, retesting must start at the point of repair if it is before the point of failure.

- **Interface**—A method of verifying the integrity of communications among related and/or dependent applications. Interface Testing may also include the verification of processing cycles (e.g., monthly, annual) associated with program interfaces.
- **Negative**—A method of using valid input to verify how a program handles errors. Negative testing concentrates on what a system should NOT do.
- **Performance**—A form of validation used to understand the scalability of an application or website—or to benchmark the reliability of third-party products under consideration. Performance (e.g., response time) primarily is monitored at expected or normal-range volumes, including expected peak usage load or peak throughput volumes. Performance Testing is particularly useful to identify bottlenecks in high-use applications. It is commonly done on web-based applications in the final stage of testing just prior to Production implementation. Performance Testing generally involves an automated test suite to more easily simulate a variety of normal, peak, and exceptional load conditions.
- **Re-testing**—The practice of executing failed test cases to verify the success of corrective actions. The test case and test steps typically are documented in a Test Defect Report.
- **System plus testing**—Additional testing done during the system test stage, where business users help validate the results. All testing should be positive testing, as negative testing can impact the results of accounting

during this stage. Testing scope should be limited and predetermined, and test cases should be written prior to the start of testing. The goal is to execute a portion of the testing in advance of the formal UAT stage so that additional time is allowed for managing the defects found during this time. A mix of business users with varying degrees of experience and subject matter expertise need to actively participate in a controlled environment. Tests need to be designed and conducted in a manner that reflects activities and conditions seen in normal business usage. Business users participate in evaluating the results.

- **Validation**–The practice of examining and providing objective evidence that the requirements for a specific intended use or application have been met.

#### **Defect management.**

- All defects related to testing must be logged on the testing defect report.
- Defects can be technical, functional or non-functional. All fields of the testing defect report must be filled with detailed information to allow the assigned resource to quickly understand the defect and expedite a resolution.

#### **Defect tracking.**

- The test lead will hold daily meetings to review Severity Level 1 and 2 defects. The meeting will also be used to alert the testing teams that

certain defects are fixed and ready to be moved into a new environment for re-test.

- The Test Lead will facilitate the following discussions with the test team members:
  - Review of all severity Level 1 and 2 defects.
  - Review new defects and make assignments to the appropriate technology group.
  - Review the timing of the defect fixes and alert testers to when they can re-test a defect.
  - Hold a discussion on test schedule revisions.

**Defect fixes.** All defects need to be fixed within the designated timeframes determined by the Project Team unless prior agreement is reached:

- **Critical (Severity 1):** Critical is defined as very serious or degrading conditions within the application or environment, which results in NOT being able to move to the next step of the test case, or to another test case until a fix is applied. This would include the workstation being locked up, requiring a reboot or power down to recover.
- **High (Severity 2):** High is defined as serious or degrading conditions within the application or environment which might result in NOT being able to move to the next step of the test case, or to another test case until a fix is applied.



- **Medium (Severity 3):** Medium is defined as processes that have a business workaround identified, a test case that can be skipped, or a step in the test case that can be skipped without halting test execution.
- **Low (Severity 4):** Issues with minimal impact on the user experience and/or a workaround exists. However these issues can be fixed with a simple change, thereby having minimal impact on the test case.

**Defect metrics.** The Project will produce and report metrics of the final defect results on the Test Summary Report. Following are the metrics to be gathered by test stage:

**Defects by severity.**

<b>Defect definitions: Defect Status</b>	<b>Description</b>
<b>Change Request</b>	The defect is deemed not valid (e.g., the code is working as designed) and a change request is required to update requirements and/or traceability documentation.
<b>Closed</b>	The defect has been resolved and requires no further work.
<b>Deferred</b>	The defect will not be fixed as part of the current release but as part of a future release, as determined by the project team.
<b>Failed Retest</b>	The fixed defect did not perform as expected under examination.
<b>Monitor</b>	The defect cannot be recreated or recurrence is unpredictable. A defect may retain Monitor status throughout the entire testing stage and even throughout the pilot phase.
<b>New</b>	The initial status of all Defects when they are first reported and waiting to be assigned.
<b>Open</b>	The initial status of all defects when they are first reported and waiting to be assigned.
<b>Passed</b>	The defect has been successfully re-tested.
<b>Ready to Retest</b>	The code defect has been fixed and/or the defect has been moved into the test environment. This status confirms that the code/package may be tested again.
<b>Working as Designed</b>	The code or functionality operates as defined by requirements (i.e., the defect is not inherent in the program but rather due to incongruent business and/or technical specifications).

Guidelines followed to collect the Project Requirements.

**Business Requirements:**

- Ensured the future consolidated process created a minimized business impact, related to the cost of implementing the solution and business cost of the solution, while providing a sustainable solution moving forward.
- Implemented the solution that meets the tax business needs, regulatory requirements, and minimize any impact to the business process, information needed to manage the business, or impact to the end users, independent or internal advisors.
- Minimized the impact of the business process of the marketing print, order fulfillment, and other services related either the RRD or 3<sup>rd</sup> party supplies.
- At a minimum, maintained the same level of detail and summary transactional information in order to run the business without impacting the accounting operations or the business close cycle.
- At a minimum, maintained the same level of detail and summary transactional information in order to complete the procure-to-pay process minimizing impacts to accounts payable, accounting operations, or the business close cycle.
- Ensured the change in the inventory process takes into consideration the liability impact related to the change in the process.

**Sales/Use tax requirements:**

- The data transfer inbound and outbound to XYZ systems and processes contained the proper content, at the proper detailed level, and proper

frequency to meet the tax department's capabilities to manage the sales and use tax for XYZ and meet the level of detail information to satisfy the requirements of sales/use regulatory audits.

- Transaction line level detailed information collected (RRD & 3<sup>rd</sup> Party) to drive and book the proper tax charges and expenses to the external and internal advisors.
- Implemented a consistent sales/use tax process across all business units within XYZ.
- Consistent line level detail information collected on every transaction (RRD & 3<sup>rd</sup> Party) that will support the tax calculation and charge submitted through the G/L transactions.
- All sales tax were calculated by RRD
- Related processes such as direct shipping process with UPS and USPS direct postage charging process were not be impacted

**Technology requirements:**

- All changes in interfaces were supported by technical specification requirements.
- All information exchanged between XYZ and RRD followed the existing 'system exchange, balancing and controls, and security protocols'.

**Data Analysis**

Data was analyzed by conducting Joint Application Development sessions with the vendor, stakeholders and the business.

## **Timeline**

- Data Analysis – July1 , 2015
- UAT Test Scenarios Completed – July 22, 2015
- Weekly UAT test meetings in place – July 1, 2015
- UAT Test Scripts Completed – July 22 through Aug 31
- 1<sup>st</sup> Draft UAT Test Design Specifications document – July 25, 2015
- Final UAT Test Design Specifications document – Aug 24, 2015
- UAT Communication Plan – Aug10, 2015
- Final UAT Operational Plan and Cycle Planning documents – Aug 30, 2015
- UAT Kick off meeting – Sept 5, 2015
- Test Scripts in Quality Center – Aug 30, 2015
- Traceability Report – Sept 30,2015
- UAT1 Start – Sept 1, 2015 (vendor QA 8/3-8/31)
- UAT2 Start – Oct 1,2015
- SIT Start – Nov 1,2015
- Go Live – Jan 31 ,2016

## **Summary**

This chapter summarized the methodology used, and also explained in detail how different guidelines were used to collect the data. Data collection and analysis will be discussed in the next chapter.

## Chapter 4: Data Presentation and Analysis

### Introduction

This chapter will focus on the data presentation and analysis. It describes the different steps associated with the data collection process.

### Data Presentation

Data were collected from the requirements guidelines. Scenarios were written based on the user requirements. Below are the snapshots of data that was collected. Column values were filled by cross-referencing various business documents and collaborating with the different stakeholders involved in the project.

### Transition to the new process.

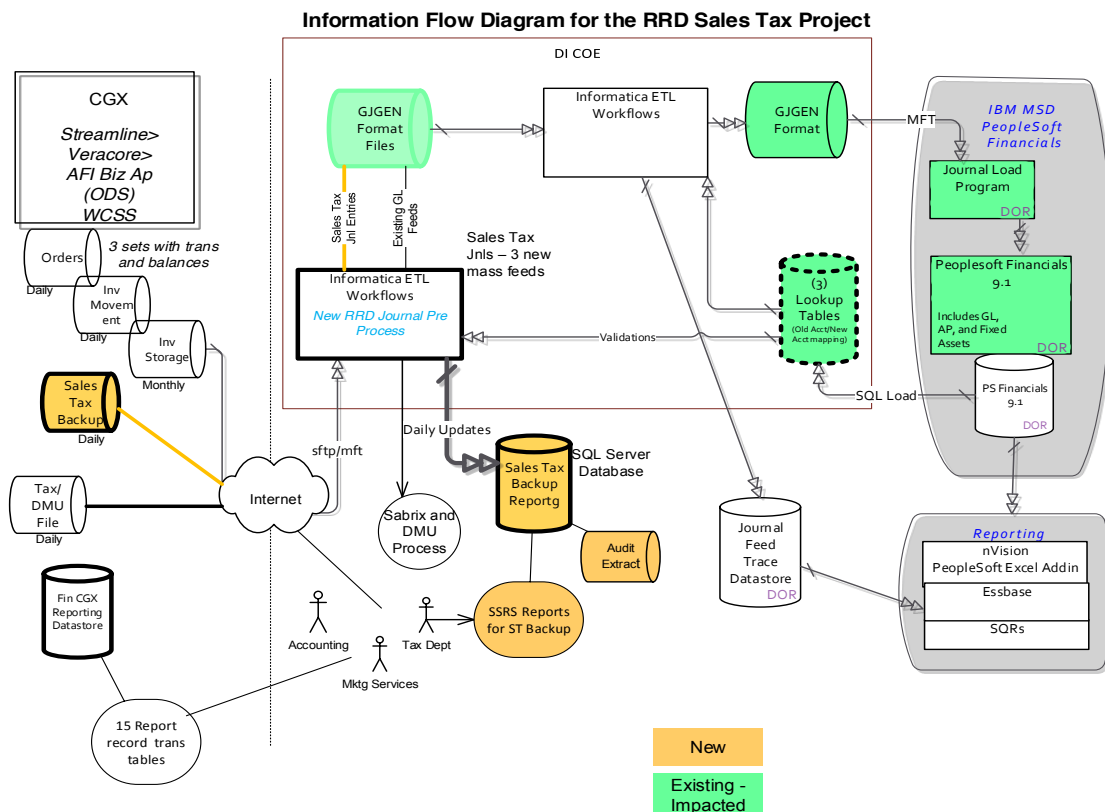


Figure 4.1: Information Flow Diagram of RRD Sales Tax Project

Business Requirements: Business Requirements were collected by having meetings with the business and the stakeholders involved in the project.

### Business requirements.

Table 4.1: Business Requirements

ID	Name* NOTE: Maximum 255 Characters	Description	Comments
Business requirement -1	Ensure the future consolidated process creates a minimized business impact, related to the cost of implementing the solution and business cost of the solution, while providing a sustainable solution moving forward.		

Status	Requirement Priority	Stability	Source	Traceability	Bus/Tech
Accepted	Mandatory	Stable			Business

Developed by	Business Function	Category*	Packaged Solutions	Owner	Stakeholder	Author	Business Case Priority
						John Pawlowski	Primary

Custom	Target Release	WorkStream*	Path

User requirement were written down based on the business requirements.

## User Requirements.

Table 4.2: User Requirements

ID	Name* NOTE: Maximum 255 Characters	Description
<b>Tax File Backup</b>		
UR-TAX-1	Vendor must provide XYZ all required data (see attached) for all activity coming from the vendor	See attached for list of all possible data elements vendor must provide. Data elements required will vary depending on vendor activity.
UR-TAX-1.1	Vendor must calculate Sales Tax on all applicable activities	

Phase	Script Needed	Responsible Group
UAT	Yes	Swati, Mike, Joyce
UAT1	Yes	Swati, Mike, Joyce

Scenarios were then created from the user requirements. There was a one to many relationships between the UR's and the Scenarios.

## Scenarios.

Table 4.3: Scenarios

Requirement	Customer/Advisor Type (ordering)	SSO ID	Password	Customer/Advisor Type (charge to)
UR-Tax 1.1 – Vendor must calculate Sales Tax on all applicable activities		canfou125 (AAG Staff)	may@2015	Area Office

Activity	Product Description	Material Type	Notes	Item Priced (Y/N)
Order priced item material type Stationery with rush fee and customization fee (change ship to information)	Standard Business Card – 1 Sided (Franchise)	232615	Ordering this as AAG Staff (Changed product from 232618 to 232615)	Y

Quantity	Price of items	Rush Fee	Customization Fee	Order Type
1	32	Y	Y	



Test scripts were then written from the Scenarios:

Table 4.4: Test Scripts

Scenario NO.	Requirement	Subject *	Test ID	Test Case ID	Test Case Name*
2	UR-Tax 1.1 - Vendor must calculate Sales Tax on all applicable activities	Quality Center	TS_0001	TC_SageTax0001	verify that user is able to place order for material no. 231740

Test Description	Test Priority*	Step #*	Description (step instructions)	Expected Results
verify that user is able to place order for Order priced item material type PickPack with rush fee		1	Open the default browser and enter URL: <a href="https://xyzstage.worksmartsuite.com/UserContentStart.aspx">https://xyzstage.worksmartsuite.com/UserContentStart.aspx</a>	Prompted to enter login details.

All the data was uploaded in quality center for traceability purpose.

Project was carried out by performing 7cycles of UAT and 3 cycles of SIT testing. Defects were captured in Quality center and communicated to the stakeholders through the RAID log. Daily Defect calls were set up with the business and the 3<sup>rd</sup> party vendor and all the defects were resolved by the end of UAT cycle 6. Project was executed in QC and defects were logged:

Step 1: All the user requirements collected and approved by business were entered in QC.

### Project requirements.

The screenshot displays the HP Quality Center web application. The main content area shows a list of requirements with the following data:

Name	Direct Cover Status	Author	ReqID
Destroyed material...	Passed	mbrack	761
Sales tax debits an...	Not Covered	mbrack	762
The tax amount tota...	Passed	mbrack	763
Intercompany rules...	Passed	mbrack	764
Destroyed material...	Not Covered	mbrack	765
Access to transact...	Not Covered	mbrack	766
Monthly storage file	Not Covered	mbrack	767
Control File for the...	Not Covered	mbrack	768
General Ledger inp...	Not Covered	mbrack	769
A two sided (with de...	Not Covered	mbrack	770
Storage File tax Ge...	Not Covered	mbrack	771
Storage File CPC c...	Not Covered	mbrack	772
Tax must be record...	Passed	mbrack	773
Tax expense follow...	Passed	mbrack	774
Intercompany rules...	Not Covered	mbrack	775
Storage file trans in...	Not Covered	mbrack	776
Reporting Tool add...	Not Covered	mbrack	777
Arbitr invoiced seri...	Not Covered	mbrack	778
Vendor must provid...	Passed	mbrack	779

The description for the selected requirement (ReqID 761) is: "Destroyed material file must include the following fields for each line item that was destroyed: Tax expense amount, Unit Business, and Item number(s). Unit".

Figure 4.2: Requirements for the Project

Step 2: The Test cases were written in the test plan and were traced back to the requirements.

### Test plan.

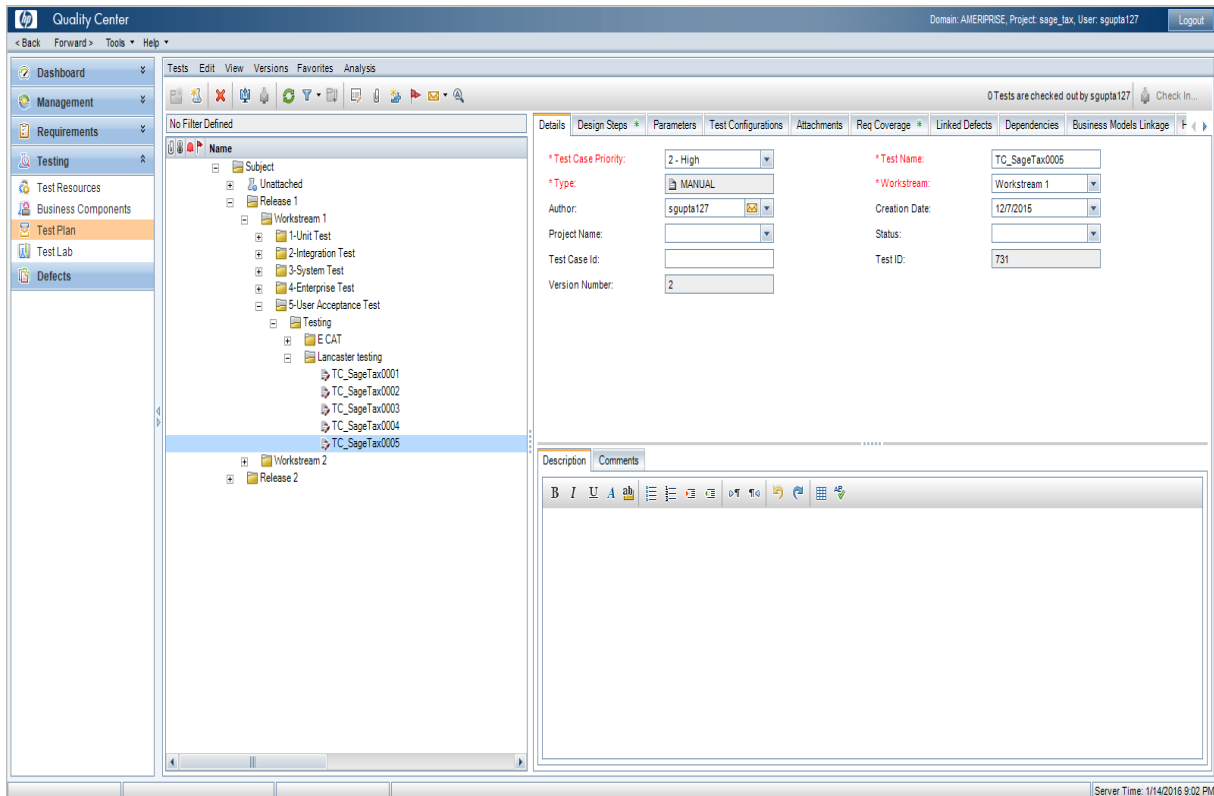


Figure 4.3: Test Plan for the Project

Step 3: The test cases were then executed in the test lab.

## Test cases.

The screenshot displays a test management interface. On the left is a tree view of test cases organized into releases and workstreams. The main area shows a table of executed test cases, all with a 'Passed' status. Below the table is a 'Last Run Report' for a specific test case, showing a list of steps that were all successfully completed.

Name	Test: Test Name	Type	Status	Iterations	Planned Host...	Responsible...	Exec Date
[1]TC_SageTax0001	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0002	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0003	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015
[1]TC_SageTax0004	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0005	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015
[1]TC_SageTax0006	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0007	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0008	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0009	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0010	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0011	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0012	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015
[1]TC_SageTax0013	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0014	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0015	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0016	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0017	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0018	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0019	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015
[1]TC_SageTax0020	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0021	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015
[1]TC_SageTax0022	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015

Step Name	Status	Exec Date	Exec Time
1	Passed	10/14/2015	5:25:56 PM
2	Passed	10/14/2015	5:25:56 PM
3	Passed	10/14/2015	5:25:56 PM
4	Passed	10/14/2015	5:25:56 PM
5	Passed	10/14/2015	5:25:56 PM

**Steps Details**

**Description:**  
Open the default browser and enter URL:  
<https://amerprisestage.worksmartsuite.com/UserContentStart.aspx>

**Expected:**

Figure 4.4: Test Cases Executed

## Test case execution grid.

<span>Details</span>   <span>Execution Grid</span>   <span>Execution Flow</span>   <span>Automation</span>   <span>Attachments *</span>   <span>Linked Defects</span>   <span>History</span>								
Name	Test: Test Name	Type	Status	Iterations	Planned Host...	Responsible...	Exec Date	
[1]TC_SageTax0001	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0002	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0003	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015	
[1]TC_SageTax0004	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0005	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015	
[1]TC_SageTax0006	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0007	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0008	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0009	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0010	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0011	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0012	TC_SageTax0...	MANUAL	Passed			akumar151	10/21/2015	
[1]TC_SageTax0013	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0014	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0015	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0016	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0017	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0018	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0019	TC_SageTax0...	MANUAL	Passed			akumar151	10/14/2015	
[1]TC_SageTax0020	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0021	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	
[1]TC_SageTax0022	TC_SageTax0...	MANUAL	Passed			akumar151	11/6/2015	

Last Run Report					Steps Details
Step Name	Status	Exec Date	Exec Time		
1	Passed	10/14/2015	5:25:56 PM		<b>Description:</b>
2	Passed	10/14/2015	5:25:56 PM		Open the default browser and enter URL:
3	Passed	10/14/2015	5:25:56 PM		<a href="https://ameripristage.worksmartsuite.com/UserContentStart.aspx">https://ameripristage.worksmartsuite.com/</a>
4	Passed	10/14/2015	5:25:56 PM		UserContentStart.aspx
5	Passed	10/14/2015	5:25:56 PM		<b>Expected:</b>

Figure 4.5: Test Cases Passed/Failed

Step 4: The Defects were logged

## Defects.

Actual Fix Time	Assigned To	Business ...	Closed in ...	Closing Date	Comments	Defect ID	Description	Detected By	Detected in ...	Detected in ...	Detected in ...	Detected on ...
	sgupta127			11/6/2015		1	Test Set: Ecot Te...	sgupta127				9/9/2015
	sgupta127			11/6/2015	These orders will...	2	All 52 orders pla...	sgupta127				9/10/2015
	sgupta127			11/6/2015	These scenarios...	3	All 35 scenarios...	sgupta127				9/18/2015
6	akumar151			10/21/2015	Raghupathi Red...	4	SUT.P.P1.CGX...	rrpucha				10/1/2015
4	akumar151			10/8/2015	Raghupathi Red...	5	https://reportport...	rrpucha				10/5/2015
3	rrpucha			10/8/2015	Raghupathi Red...	6	Debit & Credit va...	rrpucha				10/6/2015
2	akumar151			10/8/2015	Raghupathi Red...	7	https://reportport...	rrpucha				10/7/2015
2	akumar151			10/9/2015	Raghupathi Red...	8	https://reportport...	rrpucha				10/8/2015
	rrpucha					9	https://reportport...	rrpucha				10/9/2015
2	akumar151			10/14/2015		10	https://reportport...	rrpucha				10/13/2015
	sgupta127			11/6/2015	RRD made a fix...	11	There is missing...	sgupta127				11/4/2015
	sgupta127			11/6/2015	RRD made a fix...	12	Dest- 177724. 1...	sgupta127				11/4/2015
	sgupta127			11/6/2015	RRD made a fix...	13	Sales Tax Amou...	sgupta127				11/4/2015
	sgupta127			11/4/2015	This change has...	14	Line 193 and 21...	sgupta127				11/4/2015
	sgupta127			11/4/2015	[Doug] This is th...	15	Master invoice n...	sgupta127				11/4/2015
	sgupta127			11/4/2015	9/23: fix is in pla...	16	Line 41 in STBF...	sgupta127				11/4/2015
	sgupta127			11/4/2015	9/23: RRD we ta...	17	A lot of the test c...	sgupta127				11/4/2015
	sgupta127			11/4/2015	Updated solution...	18	Invoice 7640458...	sgupta127				11/4/2015
	sgupta127			11/4/2015	RRD: 9/24: imp...	19	Invoice 7749269...	sgupta127				11/4/2015
	sgupta127			11/4/2015	RRD confirmed L...	20	Invoice 5217764...	sgupta127				11/4/2015
	sgupta127			11/4/2015	RRD verified that...	21	Invoice # 796757...	sgupta127				11/4/2015
	sgupta127			11/4/2015	RRD fixed the is...	22	P2 filter is still no...	sgupta127				11/4/2015
	sgupta127			11/4/2015	RRD: 10/19: Th...	23	O703927000832...	sgupta127				11/4/2015

Figure 4.6: Defects Logged

Defects were communicated to the vendor and the business through the RAID log document. Daily UAT calls were set up to discuss the issues listed in RAID log and find the best possible solution to resolve them. The failed cases were re-executed in the next cycles until all the test cases passed. The defects were closed with the closing comments.

Raid log: The defects captured in Quality center were communicated to the 3<sup>rd</sup> party vendor through the RAID log excel document.

**RAID log.**

Table 4.5: RAID Log

Status (↓)	ID	Title	Issue Description	Assigned To
Open	PGL1	STBF- Tech	The Sum Amount value is zero.  ETL job has failed and will not generate any feed for GL.	Suman/Ravi

Due date	Custom Field	Resolution	RRD comments	XYZ Comments
12/14/2015		ETL will do the code change and migrate to E3. Suhas will confirm when the migration is complete.		The should not be an error as it is possible there will not be any tax charged, however this should be a message send out indicating the nightly run didn't produce any tax activity. ETL is creating an incident which is not required. A configuration change will be done.

**Data Analyses**

The data were analyzed by conducting 1:1 and group meetings with the business and filtering out based on their response as to which ones are valid and invalid user requirements and scenarios. The invalid user requirements and scenarios were discarded and approval was gained for the valid user requirements and scenarios prior to writing scripts.

### Join application development sessions.



Figure 4.7: JAD Sessions for Data Analysis

### Summary

In this chapter techniques used to collect and analyze the data were discussed. Results of the project, conclusion and recommendations will be discussed in the next chapter.



## Chapter 5: Results, Conclusion, and Recommendations

### Introduction

In this chapter the results of the project, conclusion and recommendations will be discussed.

### Results

After considering all the requirements a standard process for calculating sales tax for the print, order fulfillment, and related services of marketing materials was implemented.

Project questions answered:

- How many cycles of testing will be required to capture results?
  - UAT 7cycles and SIT 3cycles
- Which business applications will be affected?
  - GL and TAX
- What is the current process for calculating tax?
  - 3rd party vendor will now do all tax calculations
- What are the different types of testing that will be required to capture information flow?
  - UT,UAT and SIT

### Conclusion

The study was about Using Quality Center to ensure that the Existing Business Process is retained with the new 3<sup>rd</sup> party supplier.

By conducting several cycles of testing it was verified that the process used by vendor for calculating tax is now in synchronization with the XYZ and RRD existing business process.

### **Recommendations**

Although the project was a success but for sharing information with the 3<sup>rd</sup> party vendor an online (Google?) way of sharing information during testing would have been easier than distributing an Excel file daily. XYZ has a system "Organize" that could be used for this in the future to exchange documents with 3<sup>rd</sup> parties.

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