

Technical Design
Document

Ricoh On-Premises
Electronic Document
Management Solution

Designed for
Hidalgo County

RICOH
imagine. change.



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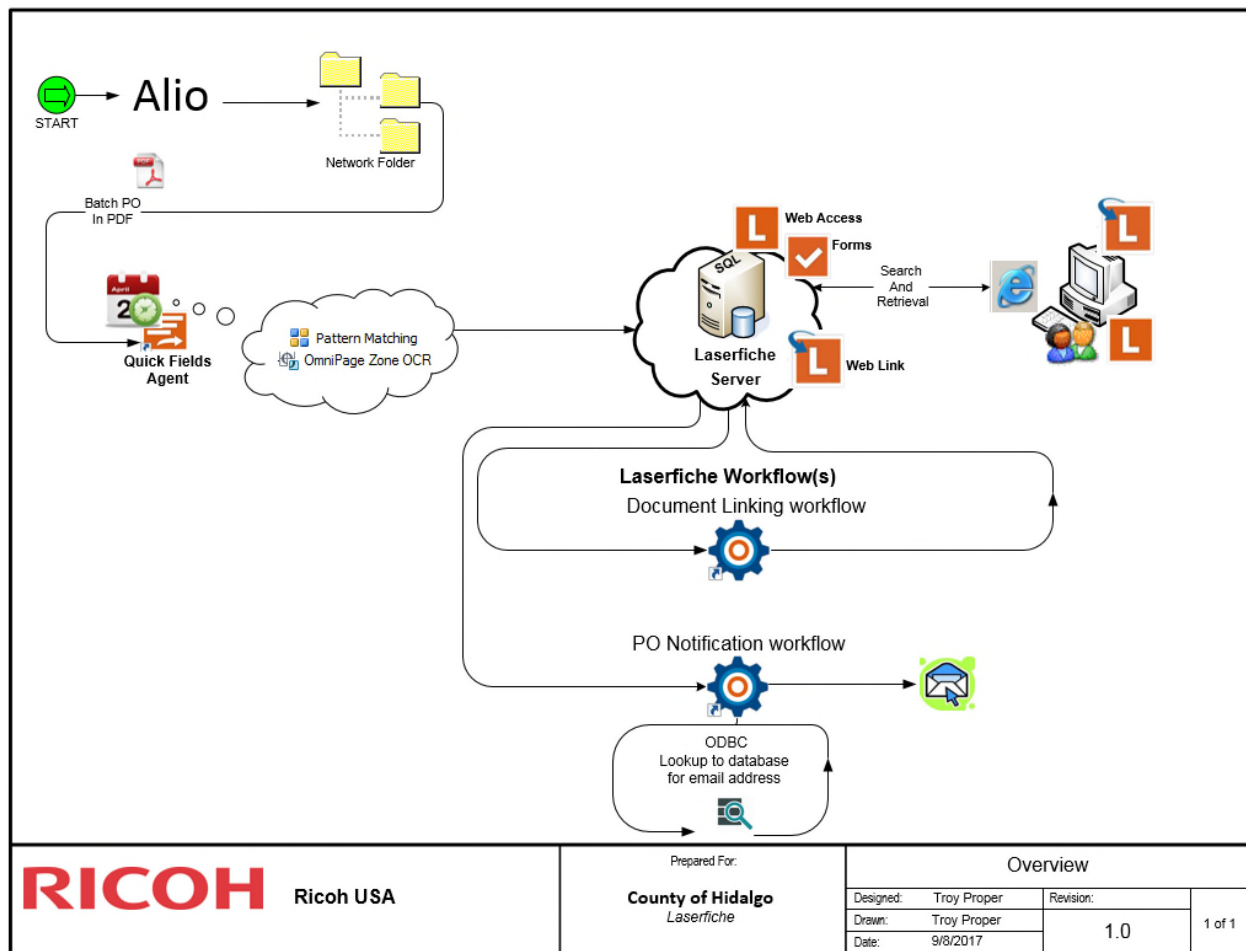
Introduction and Objective

RICOH USA, INC. ("RICOH") has prepared the following technical design document (TDD) for Hidalgo County to detail services to be performed for the Ricoh Document Management Solution project, based on Statement of Work number DR- 21432564.

Solution Overview

Summary Overview & Highlights)

After interviews with the client and carefully analyzing their current purchase order process, it has been determined that Laserfiche Avante would be utilized within this design. Laserfiche and associated modules can easily accomplish the goals required while allowing for ample future growth within the county.

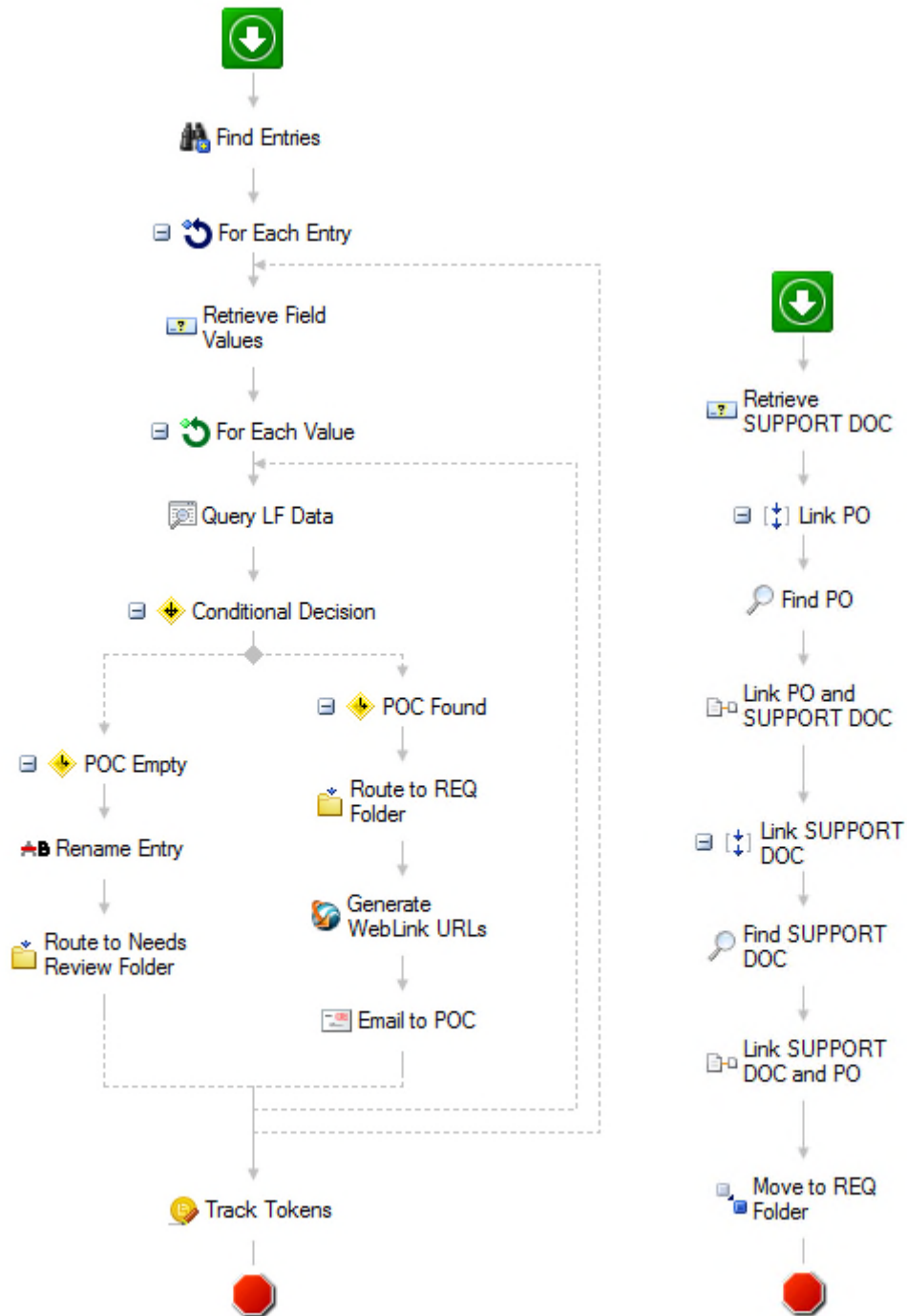


Enterprise Outcome

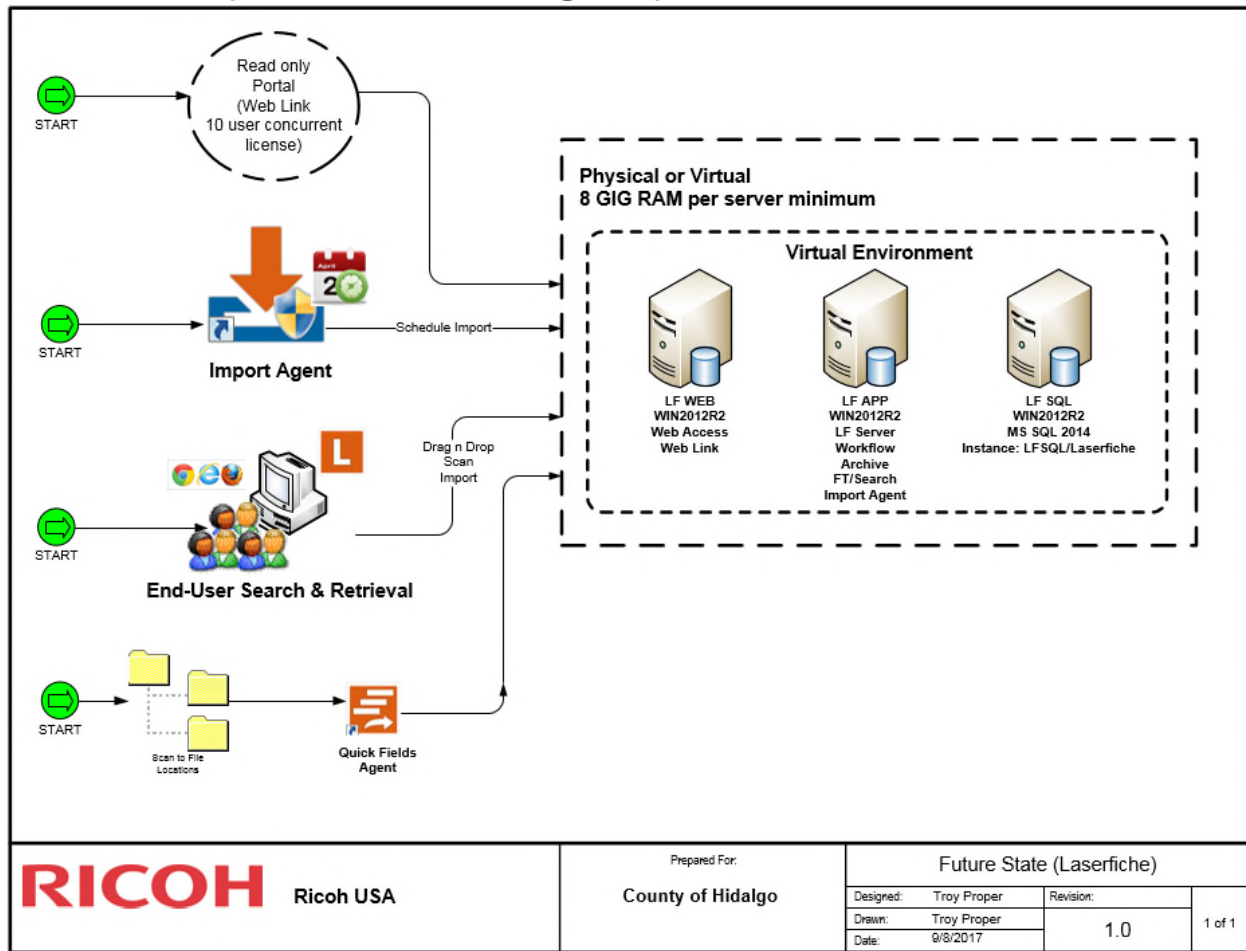
- Elimination of Alio paper based output batch file
- Quick and efficient parsing of purchase orders (single or multi page)
- Auto-distribution of purchase order
- Read-only access for receiving users
- No physical email attachments to slow or overload mail system
- Web-based workstation client for easier maintenance, support, and deployment

Process 1

Workflow (s) – Purchase Order Notifications and Document Linking



Infrastructure (Narrative and/or Diagrams)



Product/Service Definitions

Product License Elements

Included:

- Laserfiche Avante Server (Full Microsoft SQL)
- Laserfiche Avante Quickfields

- Laserfiche Avante Zonal OCR
- Laserfiche Avante Web Distribution Portal
- (6) Laserfiche Avante Full Named Users

Optional:

- Laserfiche Avante Quickfields Agent

Laserfiche Avante

- File Server (Physical or Virtual) running 2012 R2, Joined to the customer's domain
 - Backup regimen to protect data
- Laserfiche Avante Software
 - Web Access
 - Workflow
 - Import Agent
 - Weblink – 10 user concurrent
 - Six (6) Name Licenses
 - one (1) year of M&S
- Install and license Laserfiche Avante server components
 - Forms 10.2
 - Workflow
 - Web Access
 - Version 10.2 using Full SQL
 - Quick fields Agent
 - Quick Fields
- Configure up to three (3) user groups
 - Admin
 - Edit
 - Read only
- Create a single repository for Documents to include the following
 - Create up to two (2) templates to include the following index fields
 1. Purchase Order
 1. PO Number – Populated by Quick Fields
 2. REQ – Populated by Quick Fields
 3. Address – Populated by Quick Fields
 4. Ship To – Populated by Quick Fields
 5. Contact Name – Populated by Quick Fields
 6. Contract Number – Populated by Quick Fields
 7. Site – Populated by Quick Fields
 2. Supporting Docs
 1. PO Number – Populated by user

- Configure one (1) Quick Fields Session to include the following:
 1. PO - Hidalgo

The image shows two screenshots from a software configuration tool. On the left is a 'Session Configuration' tree view. The root node is 'PO-Hidalgo', which contains 'Pre-Classification Processing' and 'Classification'. Under 'Classification' is the session 'PO - HIDALGO'. This session includes several steps: 'First Page Identification' (with sub-steps 'ID_Zones' and 'Page Processing'), 'Page Processing OCR' (with sub-steps 'OmniPage OCR', 'Find Account Codes', and 'Vendor Name'), 'Last Page Identification', and 'Post-Processing'.

On the right is a configuration form for the 'PO - HIDALGO' session. It has a title bar 'PO - HIDALGO' and two tabs: 'Fields' and 'Options'. The 'Fields' tab is active and contains the following fields:

- Default document name: PO %(PO Number)
- Store documents in: \\HIDALGO\POs To be Assigned\
- Fields: %(Vendor) - %(VendorName)
- REQ: %(REQ)
- Address: %(Address)
- Ship To: %(Ship to)
- Contact Name: %(Contact)
- Site: %(Site)
- Contract Number: %(Contract Number)
- Account Number: %(Find Account Codes)

- Create two (2) Workflows to include:
 1. Workflow 1 – PO Notification
 2. Workflow 2 – Document Linking between PO and Supporting Docs
- Configure Laserfiche SnapShot, Office integration and shortcuts for Web Access on up to five (5) workstations

Technical Prerequisites

- Workstations accessing Laserfiche configured per the instructions detailed in the Appendix of this TDD
- Adequate bandwidth (5 Mbps upload/15 Mbps download)
- Remote access to multifunctional printer(s) (MFP[s]) used in this project
- Ricoh MFP(s) used in this project must be installed with Java 7x-12x without a Ricoh SmartPanel, be assigned a static or reserved IP address, and have access to the Internet
- Remote Access to each workstation and Laserfiche server
- Local administrator access to workstation and Laserfiche server
- Laserfiche admin user will have full access to all Feature Rights and Privileges. This account will be the only user or group with any set privilege rights. This account should not be placed into any group.

NA

Solution Components

- One Customer kickoff meeting to walk through Statement of Work (SOW), set project expectations, and establish preliminary schedule
- Collect Customer site information required to complete the Technical Design Document (TDD)
- Present TDD and obtain Customer signature agreement
- Finalize project schedule with Customer agreement
- Install MS SQL 2008 R2 SP2 or higher on the Laserfiche Server or connect to existing Microsoft SQL Database (See Appendix for Requirements)
- Install, license, and configure the Laserfiche Server
- Install, license, and configure the Laserfiche Web access with IIS.
- Install, license, and configure the Laserfiche Client and Administration Console on the Laserfiche Server
- Install, license, and configure the Laserfiche Workflow on the Laserfiche Server

- Install and license the Laserfiche Audit Trail on the Laserfiche Server (Installed for future use, but not configured as part of this project)
- Install and license the Laserfiche Import Agent on the Laserfiche Server (Installed for future use, but not configured as part of this project)
- Install and configure Laserfiche Client and Snapshot on 6 machines
- One Customer Closing meeting to walk through AS Built configuration information, set after-project expectations, and establish support post project.
 Will be provided at project closure meeting

Server Infrastructure

Hidalgo County has provisioned the following servers for the installation of the Laserfiche Server, Workflow, WebAccess, Mobile, Audit Trail, and Import Agent:

Laserfiche Server / SQL

- Server OS, Memory, Hard Drive
- Server Host Name: EDI-KM-SQL
- Server IP Address: 10.1.10.22
- Domain Login/Service Account (must have local admin rights): ricoh.installer
- Domain Login/Server Account Password: Customer owned provided by email
- Database Password: Customer owned provided by email
- Laserfiche Organization Admin Account: Admin
- Laserfiche Organization Admin Password: Customer owned provided by email

Laserfiche Workflow

- Laserfiche Workflow Server Account: EDI-KM-LF-APP
- Laserfiche Workflow Server Password: 10.1.10.27
- Laserfiche Workflow Subscriber Account: Workflow
- Laserfiche Workflow Subscriber Password: Customer owned provided by email
- Laserfiche Workflow Email SMTP information used for Notifications(Server, Port, default SMTP user and password): Customer owned provided by email

Laserfiche Web Access / Web Link

- Server OS, Memory, Hard Drive
- Server Host Name: EDI-KM-LF-WEB
- Server IP Address: 10.1.10.26
- Laserfiche Web Server Account: Customer owned provided by email
- Laserfiche Web Server Password: Customer owned provided by email

Hidalgo County has provisioned the following Client machines for installation of Laserfiche Client and Snapshot:

Laserfiche Client and Snapshot

Location
On client machines listed as Edit user accounts (listed in the User accounts section)

Laserfiche 10.x.x Installation

- RICOH will install the Laserfiche Server, Client, WebAccess, Workflow, Audit Trail, and Import Agent application to three servers provided by customer
- RICOH will install the Laserfiche Client and Laserfiche Snapshot on up to twenty-five (5) machines

System Functional Design

- Create the Laserfiche Repository (including the database and volume).
- Confirm the repository has been successfully created by connecting to it using the built-in Laserfiche Admin account on the Laserfiche server.
- Create 6 named user accounts and 2 group accounts, and assign group permissions to include one group with read-only access and one group with full read/write access to Laserfiche.
- Create two Laserfiche workflow process design to include a process approval system using up to two Laserfiche User Groups
- Create up to one template and up to six fields.
- Create 1 department folder and up to ten (10) subfolders in the Laserfiche client.
- Assign group permissions to Laserfiche folder structure.
- Install the Laserfiche Client and SnapShot software on 5 workstations and connect each Client to the Laserfiche Repository.
- Confirm the end user accounts created can log in to the Laserfiche Repository and access the appropriate folders.
- Confirm documents can be imported into Laserfiche using drag and drop, and can be sent to Laserfiche with SnapShot on each installed Laserfiche workstation.
- Confirm a scanned and indexed document is successfully sent to the Laserfiche Repository on each installed Laserfiche workstation.

Laserfiche Licensing Account Setup

- RICOH will complete the Laserfiche registration form for licensing and Customer access to the Laserfiche Web site.
- Ricoh will license the entire Laserfiche Avante Suite including Laserfiche Server, WebAccess, Workflow, Mobile, Client, Audit Trail and Import Agent.

Laserfiche– User Internal Accounts

- All passwords will be preset to: will be provided to the customer
- For Laserfiche Internal set up, users will be encouraged to change their password upon first sign on.
- RICOH will establish the following Laserfiche user accounts :

Log In Name	Full Name	Email	Group
Admin	Admin	None	Organization
AMaldonado	Ariana Maldonado	ariana.maldonado@co.hidalgo.tx.us	Power Users
EGomez	Elena Gomez	elena.gomez@co.hidalgo.tx.us	Power Users
HGarcia	Hector Garcia	hector.garcia@co.hidalgo.tx.us	Power Users
LLopez	Liza Lopez	liza.lopez@co.hidalgo.tx.us	Power Users
BRoque	Betsy Roque	betsy.roque@co.hidalgo.tx.us	Power Users
DTrevino	Dina R. Trevino	dina.trevino@co.hidalgo.tx.us	Power Users

Laserfiche– Group Profiles

RICOH will establish the following Laserfiche Group Feature Rights:

Group	Feature Rights
Read Only	View
EDIT	ALL
Admin	Admin

Laserfiche – Folder Design

RICOH will establish the following template and assigning the appropriate permission set:

Folder	Group	Permission
Purchase Orders	Admin	All Rights
	View	Browse, Read, and See Annotations
	Edit	All Rights

Template Index Fields

RICOH will establish the following field types:

Field Value	Field Type	Length or Limits	Required?	List Value
PO Number	Alphanum	50	Y	NA
Req	Alphanum	50	N	NA
Address	Alphanum	100	N	NA
Ship To	Alphanum	100	N	NA
Contract Name	Alphanum	50	N	NA
Contract Number	Alphanum	50	N	NA
Site	Alphanum	50	N	NA

Training and Documentation

In this phase, Ricoh will provide the following materials and training for Customer. This training will be provided to the users that will be participating in the UAT Phase to enable the Customer resources to complete the UAT. These individuals will be the users that will conduct the "Train the Trainer" sessions for all remaining users.

Within the timeframe budgeted for this process Ricoh will:

- One (1) imaging training session up to 2 (Two) hours
 - This "Train the Trainer" session for up to four (4) people will include the basic operational procedures for using Laserfiche, including: scanning, indexing/validation, quality control, and basic troubleshooting.
 - A solution-specific user guide will be delivered for scanner operators.
- One (1) content management end-user training session up to 4 (Four) hours
 - This "Train the Trainer" session for up to four (4) people will include the basic operational procedures for using Laserfiche, including: system overview, query, retrieval, and annotation techniques.
 - A solution-specific user guide will be delivered for Laserfiche users.
- One (1) administrative training session up to 4 (Four) hours
 - One (1) introductory training session and system structure knowledge-transfer will be conducted with network administrators or other assigned Customer staff for up to four (4) people.
 - System configuration documentation will be delivered to the technical administrators as reference for Laserfiche.

All training referenced in this section must be completed prior to UAT being completed. After UAT is complete, additional training or refresher sessions may be conducted on an as-needed basis for an additional cost to fees included in this SOW at Ricoh's standard hourly rates.

User Acceptance Testing

The primary purpose of User Acceptance Testing (UAT) is for Customer to test the entire solution from a functional standpoint in order to verify that all the features documented are working as specified in the Design documents. User Acceptance Testing is the primary responsibility of Customer. To achieve this, Customer will test the solution in a real-life environment either in or parallel to the current production environment for a period of 3 (Three) days. The UAT time period will begin directly after the Training and Documentation phase has completed. Customer is responsible for creating the UAT plan. Ricoh will provide support to Customer during the UAT period. UAT support for any new functionality or desired enhancements outside of the Design documents will be handled with the established change control procedure.

Testing should include:

- Running scanner(s) in a real-life environment
- Testing all user modules and interfaces in a real-life setting
 - Observing server modules
 -

All issues should first be reported to Customer's internal contact for analysis or escalation to the Ricoh Project Manager via the UAT Issue Log, which will be provided prior to the start of

the UAT period. Ricoh will respond to all requests either onsite or offsite, as appropriate, to resolve any issues. After the period of 3 (Three) days, Ricoh will request signoff of the project

Ricoh will assist UAT as follows: **Within the timeframe budgeted for this process Ricoh will:**

- Support the administrator through the UAT process.
- Participate in test review meetings.
- Respond to the issues as reported on the UAT Issue Log.
- Evaluate incidents and assist in resolving any issues.
- Reconfigure and test any required system changes.
- Coordinate release of configuration changes into the test environment with the UAT team leader.
- Communicate any special user requests, system change requests, and scope change requests to the Ricoh Project Manager.

Project Stakeholders

Hidalgo County

Name	Title	Phone	Email
Audry Ochoa	Hidalgo County Information Technology	(956)292-7010	audrey.ochoa@co.hidalgo.tx.us
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Betsy Roque	Procurement Specialist	(956)292-7000 ext.4858	Betsy.roque@co.hidalgo.tx.us

RICOH

Name	Title	Phone	Email
Scott Lessley	Implementer	610-382-6157	scott.lessley@ricoh-usa.com
freddie.guadalupe	Implementation Mgr.	813-261-2058	freddie.guadalupe @ricoh-usa.com
Carlos Sura	Project Design	512-381-8619	carlos.sura @ricoh-usa.com

Authorization to Proceed

The signature below indicates acceptance of the proposed implementation, as detailed within this design document in reference to Statement of work DR.

CUSTOMER

	Hidalgo County 2802 S. BUSINESS HWY 281, 78539
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Name (Print)

Organization

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Authorized Signature

Title

Date

SSilver
Digitally signed by SSilver
DN: cn=SSilver,
email=Stephen.Silver@ricoh-
usa.com
Date: 2018.03.07 09:31:29 -05'00'

**FGu
dalupe**
Digitally signed by:
FGuadalupe
DN: CN = FGUadalupe
Date: 2018.03.07 09:40:05 -
04'00'

Appendix A

Laserfiche System and Software Requirements

- Laserfiche Server
 - Recommended specifications
 - CPU: Quad-core processor
 - Memory: 12 GB RAM
 - Operating system: Windows Server 2008 or later
 - Database engine: Microsoft SQL Server 2005 (Service Pack 4), Microsoft SQL Server 2008 (Service Pack 1), Microsoft SQL Server 2008 R2, Microsoft SQL Server 2012 and 2014
 - Web Server: IIS 7 or higher (required for Audit Trail Web Reporting and WebAccess)
 - Browser (Laserfiche Audit Trail Web Reporting and WebAccess): Internet Explorer 7 or later, Microsoft Edge, Firefox, Chrome, or Safari
 - Additional Requirements
 - Laserfiche Server 10 license file or activation key, or registration via Laserfiche Rio License Manager.
 - Administrative privileges on the source computer.
 - Additional configuration may be required when the Laserfiche Server must communicate across a firewall.
 - Important: Laserfiche 10 components cannot be installed on Windows XP or Windows Server 2003. Attempting to install on these operating systems will generate an error.
- Laserfiche Web Administration Console
 - Web server: IIS 7 (Windows Vista and Windows Server 2008), IIS 7.5 (Windows 7 and Windows Server 2008 R2), IIS 8 (Windows 8 and Windows Server 2012), IIS 8.5 (Windows 8.1 and Windows Server 2012 R2), IIS 10 (Windows 10)
 - Web browser: Internet Explorer 9 or later, Microsoft Edge, Firefox, Chrome
 - Software requirements: Internet Information Services 7 or higher, IIS Windows Authentication, ASP.NET, IIS Static Content, Microsoft .Net Framework 4.0
- Laserfiche Client Recommended Specifications
 - CPU: Intel Pentium 4, Opteron, or Athlon 64, or more recent processor (at least 2.4 GHz)
 - Memory: 2 GB RAM or more
 - Operating system: Windows Vista, Windows 7, Windows 8, Windows 8.1, or Windows 10
 - Web browser: Internet Explorer 8 or later
 - For OCR
 - CPU: Intel Core 2 Duo or Athlon Phenom or more recent dual-core processor (at least 2.8 GHz)
 - Memory: 4 GB RAM or more
- Laserfiche Snapshot Recommended Specifications
 - CPU: Intel Pentium 4, Opteron, or Athlon 64, or more recent processor (at least 1 GHz)
 - Memory: 2 GB RAM or more

- Operating system: Microsoft Windows Vista, Microsoft Windows 7, Microsoft Windows 8, Microsoft Windows 8.1, or Microsoft Windows 10
- Web browser: Internet Explorer 8 or later
- Recommended specifications for performing OCR:
 - CPU: Intel Core 2 Duo or Athlon Phenom or more recent dual-core processor (at least 2.8 GHz)
 - Memory: 4 GB RAM or more
- Note: Snapshot can be installed during Laserfiche client installation
- Laserfiche Web Access
 - Recommended Specifications
 - CPU: Quad Core Processor
 - Memory: 12 GB RAM
 - Operating system: Windows Server 2008 with IIS 7, Windows 7 with IIS 7.5, Windows Server 2008 R2 with IIS 7.5, Windows Server 2012 with IIS 8, Windows 8 with IIS 8, Windows 8.1 with IIS 8.5, Windows 10 with IIS 10
 - Software Requirements
 - Laserfiche Server
 - Laserfiche Web Access 10 requires version 10 or later of the Laserfiche Server.
 - Web Server
 - Web Access is an ASP.NET 4.5 Web application for IIS. Ensure the Windows Authentication feature is enabled.
 - Internet Information Services (IIS): IIS 7 (Windows Server 2008), IIS 7.5 (Windows 7 or Windows Server 2008 R2), IIS 8 (Windows 8 or Windows Server 2012), IIS 8.5 (Windows 8.1 or Windows Server 2012 R2), IIS 10 (Windows 10)
 - Client Workstation
 - Web Access is supported on Internet Explorer 11 and later, Microsoft Edge, Firefox, Chrome, and Safari for iOS.
- Laserfiche Workflow
 - System Requirements
 - Operating Systems: Windows Vista (Service Pack 2), Windows 7 (Service Pack 1), Windows 8, Windows 8.1, Windows 10, Windows Server 2008 (Service Pack 2), Windows Server 2008 R2 (Service Pack 1), Windows Server 2012, Windows Server 2012 R2
 - Requirements for the Workflow Designer
 - Recommended: Quad Core Processor 12GB RAM or higher.
 - Requirements for the Workflow Server and Subscriber
 - Quad Core Processor, 12RAM or higher.
 - Windows Components
 - Windows Message Queuing component
 - Microsoft .NET Framework 4.5: This component will automatically be installed during the Workflow installation if you have not installed it already.
 - Note: If you are running Windows 8 or Windows Server 2012, you must install .NET Framework 4.5.
 - IIS (Internet Information Services), Note: You must install IIS 7 or higher

- IIS Basic Authentication
- IIS Windows Authentication
- IIS Management Console
- ASP.NET
- Note: If you are running Windows 8 or Windows Server 2012, you must install the ASP.NET 4.5 feature in IIS.
- Supported Database Management Systems
 - Database engine: Microsoft SQL Server 2005 (Service Pack 4), Microsoft SQL Server 2008 (Service Pack 1), Microsoft SQL Server 2008 R2, Microsoft SQL Server 2012
 - **Note:** *Customer is responsible for installing Full SQL*
- Import Agent
 - System Requirements
 - CPU: Pentium III 700 MHz processor
 - Memory: 256 MB RAM
 - If performing OCR locally: 512 MB RAM
 - Operating System: Windows Vista (Service Pack 2), Windows Server 2008 (Service Pack 2), Windows 7, Windows Server 2008 R2, Windows 8, Windows Server 2012, Windows 8.1, Windows Server 2012 R2
 - Software Requirements
 - Import Agent requires .NET Framework 4.5 or later
- Office Integration Requirements
 - Microsoft Office: Microsoft Office 2007, Microsoft Office 2010, Microsoft Office 2010 x64, or Microsoft Office 2013

Appendix B

Additional Configuration

Account Creation

When new users need access to Laserfiche, they will be created and managed in the Laserfiche Administration Tool.

Backup

Customer will backup servers, database, and Laserfiche periodically according to IT best practices to maintain application functionality.

Antivirus Exclusions

To increase Laserfiche stability, please exclude the following files from the antivirus software:

- ScanConnectClient.exe (ScanConnect)
- FileScanClient.exe (Universal Capture)
- WIAScanClient.exe (WIA)
- LFTwainClient.exe (TWAIN)
- LFKofaxClient.exe
- BPSessionClient.exe

They are located in **C:\Program Files (x86)\Common Files\Laserfiche\Batch Processor**.

Other files you should create exceptions for are:

- **BPOmniOCR82.exe (C:\Program Files (x86)\Common Files\Laserfiche\Batch Processor\BPOmniOCR164)**
- **ThumbnailGenerator.exe (in the Scanning install folder, usually C:\Program Files (x86)\Laserfiche\Client\Scanning\Utilities)**
- For LF 9.1 and higher, the OCR executable is called *LFOmniOCR.exe* and is located in **C:\Program Files (x86)\Common Files\Laserfiche\Batch Processor\BPOmniOCR185**.

Firewall Configuration

Customer will maintain connectivity to devices through firewalls based on requirements.

Laserfiche Server listens on TCP port 80 or 5050. Laserfiche defaults to port 80 except when installed on the 32-bit edition of Windows XP, where Laserfiche defaults to port 5050. The Laserfiche Server broadcasts notifications on port 5051. If there is a firewall between your Laserfiche Server instance and your client application, please make sure that ports 80 or 5050, and port 5051 are open on the firewall. You can use the *Server Settings* node of the Web Administration Console to modify the default port settings.