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**Elite Graphics, LLC**

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**IT Strategic Assessment Report**

**April 20, 2017**

Elite Graphics, LLC	Version: 2.0
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## Revision History

Date	Version	Description	Author
04/10/2017	1.0	First Draft	Ken Ballard
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## **1. Executive Summary**

This document was created to identify collect, analyze, and define high level technical needs and requirements of Elite Graphics, LLC. It will emphasize the information system abilities the organization needs as well as the needs of its customers. It is Elite Graphic's desire to analyze its current information technology situation and derive what path they should take in implementing the design of their future IT architecture and infrastructure to guarantee constant progress and expansion.

## **2. History and Purpose**

### **2.1 History of the Elite Graphics, LLC**

Elite Graphics LLC has been serving the Lexington, Kentucky area for close to 25 years. They pride themselves on being a locally owned and operated print shop business in a time where independently owned businesses are dwindling. They are a small team of only six primary employees who strive for the upmost in customer service. They believe that being a local Kentucky print ship is part of what makes Elite Graphics, LLC a trusted name in the community.

Grossing over \$5 million per year in sales, Elite Graphics administers its services primarily to businesses on the east coast of the United States. Elite Graphic's day to day information technology consists of using printing application programs, internet browsing, document editing, and email hosting. Other than the six primary employees, there are several interns who work part-time at Elite Graphics. The interns' principal role is to manage printing orders which are received either by phone, email, or third party printing management

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application. Elite Graphic's offers a wide range of products and services including door to door ads, banners, plastic yard signs, flags, pop up tents, table throws, decals, car magnets, printing accessories, vehicle wraps, shredding services, political catalogs, as well as free quotes on printing.

Since its inception, Elite Graphic's has valued the use of up-to-date information technology in its daily operations. It believes that in using the most contemporary information systems in the implementation of its printing designs in conjunction with unparalleled customer service, they will achieve greater customer satisfaction and continually ensure its foothold in the print design market. Elite Graphics further ensures its foothold in the market through its ability to communicate effectively with its customers, suppliers, and employees. The combination of this customer service initiative and its continual improvement in its information technology infrastructure has culminated in the success that is Elite Graphics, LLC.

## **2.2 Purpose of the Elite Graphics, LLC**

The purpose of Elite Graphics, LLC is to provide customers from across the United States with printing service while simultaneously maintaining impeccable customer service. Elite Graphic's products and services include door to door ads, banners, plastic yard signs, flags, pop up tents, table throws, decals, car magnets, printing accessories, vehicle wraps, shredding services, political catalogs, as well as free quotes on printing. Not only does Elite Graphics offer these products and services, but they also offer delivery of those products. According to Elite Graphics, "'We needed it yesterday'" is a phrase we often hear and we understand that timelines are sometimes unpredictable and hard to follow. Which comes in handy when

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ordering from a Local Print Shop that is near you! We make every effort to establish reasonable deadlines while providing the highest quality print materials. If you're looking for printing that doesn't end up costing you more just because you needed it yesterday, look to Elite."

### **3. Management and Business Processes**

#### **3.1 Customer Retention**

Elite Graphics takes a very systematic approach to customer retention. According to Dave Orwick, the founder of Elite Graphics, customer retention is a systematic process. The first step is to adapt to customers and target market. To adapt to its customers, Dave says you need to know what your customers want, and that typically customers want three things: 1) The perception that your business offers a deal, 2) The perception that your business offers a service or product that they can't get elsewhere, and 3) The perception that your business treats its customers well. Elite Graphics offers deals such as free delivery for bulk purchases and discounts on printing for returning customers. Though internet-based printing sites rival Elite Graphics, Elite offers a physical location for customers who want a face-to-face relationship with the individuals with whom they are doing business. Elite Graphics goes out of its way to treat its customers well. After each delivery, Elite Graphics follows up with each of its customers to ensure that the customer is satisfied with the product and the services provided.

#### **3.2 Marketing**

Elite Graphics understands that a product cannot be sold unless potential customers are

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informed of it. That's why Elite has taken considerable measures to promote itself in various ways. Elite promoted its web site by registering its URL with google.com. By doing this, any time someone searches for printing services in the Lexington area, it is much more likely that their google search will yield Elite Graphics as a result.

Furthermore, they have allowed customers to share Elite's content on social media pages. By doing this, Elite's work and information can be viewed by a multitude of individuals it otherwise wouldn't reach. Not only does this information reach people it otherwise wouldn't, but it is being endorsed by a social media "friend", giving Elite more credibility. In addition to web based marketing, Elite has invested in several print ads which are in newspapers, brochures, and other paper-based advertisements.

### **3.3 Branding Services**

Many customers come to Elite Graphics with the expectation of buying or price checking printing products and services for their personally owned businesses. If Elite were to only offer these products and services, these customers would go from printing business to printing business trying to get the best deal. When a business owner meets with an Elite consultant, they don't sell the business owner on one product or service, they sell them on branding. With Elite's affinity for graphic design, it can create a new logo for a corporation if theirs is not with the times. It can create a sign for their business, all the company letterheads, and digital copies to be sent to the customer to used as they please. So not only did the customer purchase a product from Elite, but they have made an investment in Elite as a branding consultant.

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### **3.4 Converting Raw Materials to Finished Goods to be Delivered**

Any corporation which produces a product must first have the raw materials to convert into the finished good. Elite Graphics has a strong, 20-year relationship with its raw materials supplier. This supplier provides Elite with all parchment and printing paper, ink cartridges, toner cartridges, printers, and shredders.

Not every product Elite offers is converted into a raw material in the same way. For example, banners must use a thicker printing paper than a brochure would use. Banners would also be produced on an industrial size printer as opposed to typical home printer which would be used to produce the brochures. Each job that is acquired by Elite is unique in that it requires a specific stock of paper, differing colors and schemes, and a variety of features specific to that order.

### **3.5 Accounting Process**

Elite Graphics uses a combination of Xebra and Microsoft Access to keep track of its accounting. Xebra keeps track of all its assets, accounts payable, and accounts receivable. The outstanding balances of those accounts are then entered into record in Access. Microsoft Word is then used to create an invoice document. A template is used to send letters to all open accounts receivable. This template has fields which can be imported from Microsoft Access for values such as Primary Account Holder, and Amount Owed. Creating reports this way allows for Elite to compose a current balance document to be sent to every account holder with just a few clicks of a mouse.



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#### 4. Current IT Environment

Elite Graphics, LLC currently houses printers and thirteen computers. Twelve of the thirteen computers are personal computers and one is a Mac. The following sections are the Hardware and Software sections. The Hardware section itemizes the list of computers as well as their manufacturers, models, processors, memory, operating systems, and system types. The Software section itemizes all applications pertaining to each of these computers.

##### 4.1 Hardware

###### CONFERENCE ROOM PC:

Manufacturer: DELL  
Model: Vostro 260S  
Processor: i3, 3.3 GHz  
Memory: 16GB  
Operating Systems: Windows 7  
System Type: 64 Bit

###### Cubicle 1 PC

Manufacturer: DELL  
Model: Vostro 260S  
Processor: i3, 3.3 GHz  
Memory: 16GB  
Operating System: Windows 10  
System Type: 64 Bit

###### Front Desk PC

Manufacturer: DELL  
Model: Vostro 260S  
Processor: i3, 3.3 GHz  
Memory: 16GB  
Operating System: Windows 10  
System Type: 64 Bit

###### BAY SHIPPING PC

Manufacturer: DELL  
Model: Vostro 260S  
Processor: Pentium, 2.7 GHz  
Memory: 4GB  
Operating System: Windows 10  
System Type: 64 Bit

###### Graphic Designer Mac

Manufacturer: APPLE  
  
Model: iMac (27 inch, Late 2012)  
Processor: i5  
Memory: 8GB  
  
Operating System: OSX El Capitan  
System Type: 64 Bit

###### IT Desktop

Manufacturer: ASUS  
Model: CUSTOM  
Processor: i7  
Memory: 16GB  
Operating System: Windows 10  
System Type: 64 Bit

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### **IT Laptop**

Manufacturer: ASUS  
Model: ROG  
Processor: i7, 2.7 GHz  
Memory: 12GB  
Operating System: Windows 10  
System Type: 64 Bit

### **Print Room PC #2**

Manufacturer: LENOVO  
Processor: i3, 3.3 GHz  
Memory: 4GB  
Operating System: Windows 7  
System Type: 64 Bit

### **Windows Media Server**

Manufacturer: CUSTOM  
Processor: i5, 2.7 GHz  
Memory: 16GB  
Operating System: Windows 2016 Datacenter  
System Type: 64 Bit

### **Elite's Owner PC**

Manufacturer: DELL  
Model: Optiplex  
Processor: i7, 3.6 GHz  
Memory: 16GB  
Operating System: Windows 10  
System Type: 64 Bit

### **Print Room PC #1**

Manufacturer: LENOVO  
Processor: i3, 3.3 GHz  
Memory: 4GB  
Operating System: Windows 7  
System Type: 64 Bit

### **Print Room PC #3**

Manufacturer: DELL  
Processor: i5, 3.1 GHz  
Memory: 8GB  
Operating System: Windows 7  
System Type: 64 Bit

### **Operations Manager PC**

Manufacturer: DELL  
Model: XPS  
Processor: i5, 2.7 GHz  
Memory: 8GB  
Operating System: Windows 10  
System Type: 64 Bit

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## 4.2 Software

### **BAY SHIPPING PC**

Accidental Damage Seivices Agreement	Microsoft SQL Server 2005
Adobe ReaderX (10.1.8)	Microsoft SQL Server 2005 Compact Edition [ENU]
Bing Bar	Microsoft SQL Server Native Client
CCleaner	Microsoft SQL Server Setup Support Files (English)
Citrix Presentation Server Client	Microsoft SQL Server VSS Writer
Complete Care Business Service Agreement	Microsoft Visual C++ 2005 Redistributable
Conexant HD Audio	Microsoft Visual C++ 2005 Redistributable (x64)
Consumer In-Home Service Agreement	Microsoft Visual C++ 2005 Redistributable (x64)
Dell DataSafe Local Backup	Microsoft Visual C+ + 2008 Redistributable - x86 9.0.3
Dell DataSafe Local Backup - Support Software	Microsoft Visual C+ + 2008 Redistributable - x86 9.0.3
Dell Digital Delivery	Microsoft Visual C++ 2010 x86 Redistributable - 10.0
Dell Home Systems Service Agreement	Microsoft Visual J# 2.0 Redistributable Package
Dell Support Center	MSXML 4.0 SP2 (KB954430)
FedEx Ship Manager	Windows Live Mesh Act1veX Control for Remote
Google Chrome	MSXML 4.0 SP2 (KB973688)
Google Toolbar for Internet Explorer	Muratec PCL Printer/Scanner Driver
HP LaserJet 400 M401	QualxServ Service Agreement
HP Update	Roxio Creator Starter
HPLaserJet400-M401_HelplearnCenter_S1	SearchFlyBarS Toolbarfor IE
ICCHelp	Unity Web Player
Intel(R) Processor Graphics	UPS WorldShip
Kyocera Product Library	ITTWebHelp
Microsoft Office 2010	Windows Driver Package - FTDI CDM Driver Package
Microsoft Office Click-to-Run 2010	Windows Driver Package - FTDI CDM Driver Package
Microsoft Office Starter 2010 - English	Windows Live Essentials 2011
Microsoft OneDrive	Microsoft Silverlight

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**CONFERENCE ROOM PC:**

Accidental Damage Services Agreement	Exchange VSS (remove only)
ActivePresenter	Google Chrome
Adobe Acrobat Reader DC	HP Remote Production Manager
Adobe AIR	Impressia Printer Driver
Adobe Community Help	Inter® Processor Graphics
Adobe Content Viewer	Java7 Update 71
Adobe Flash Player 25 ActiveX	Java™ 6 Update 27 (64 – bit)
Adobe Flash Player 25 NPAPI	KineticCloud (remove only)
Adobe InDesign CSS.5	Konica Minolta bizhub PRO 1200/1051
Adobe SVG Viewer 3.0	Konica Minolta PageScope Direct Print 1.1
Apple Application Support	Logitech Webcam Software
Apple Mobile Device Support	MagicDisc 2.7.106
Apple Software Update	Microsoft .NET Framework 4.6.1
ASPCA Remnder by We-Care.com c 4.1.19.1	Microsoft Office 365
AVG Protection	Microsoft OneDrive
BackupProfilesAndSettings (remove only)	Microsoft Silverlight
Banctec Service Agreement	Microsoft SQL Server 2005 Compact Edition
Belkin N600 DB USB Wireless Adapter	Microsoft Visual C++ 2005 Redistributable
Bing Bar	Microsoft Visual Studio 2010 Tools
Bonjour	MSXML 4.0 SP2
CCleaner	PackageTracer Internet Explorer Toolbar
Complete Care Business Service Agreement	Prinergy Client
Conexant HD Audio	WualxServ Service Agreement
Consumer In-Home Service Agreement	QuickTime
Dell DataSafe Local Backup	Roxio Creator Starter
Dell DataSafe Local Backup – Support Software	Skype 7.6
Dell DaraSafe Online	SystemState (remove only)
Dell Home Systems Service Agreement	TeamViewer11
Dell Support Center	Visual Studio 2012 Redistributables
EPubsoft Kindle MOBI AZW DRM Removal 8.3.5	VLC Media Player
Windows Live Mesh ActiveX Control	Windows Live Essentials 2011

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### **Cubicle 1 PC**

Adobe Acrobat Reader DC	Epson Net Print
AVG	Google Chrome
AVG Protection	Intel Graphics Driver
AVG Web TuneUp	Intel Management Engine Components
CCleaner	Intel Rapid Surge Storage Technology
CyberLink Media Suite Essentials	Intel Security Assist
Dell Customer Connect	Lorex_webplugin.exe Version 3.1.0.5
Dell Digital Delivery	McAfee LiveSafe – Internet Security
Dell Foundation Services	Microsoft Office 365
Dell Help & Support	Microsoft 365 Business
Dell Product Registration	Microsoft OneDrive
Dell SupportAssist	Mozilla Firefox 52.0
Dell Update	Mozilla Maintenance Service
Dell WLAN and Bluetooth Client Installation	Paragon HFS+ for Windows 9.1
Epson Event Manager	Realtek Card Reader
Epson E-Web Print	Realtek Ethernet Controller All-in-One Windows Driver
Epson FAX Utility	Realtek High Definition Audio Driver
EPSON Scan	Software Updater
EPSON WF-3640 Series Printer Uninstall	TeamViewer 10
	Visual Studio 2012 Redistributables

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### Graphic Designer Mac

Adobe Content Viewer	iMovie
AdobePatchFiles	Movie 9.0.8
Adobe Flash Player	iPhoto
Adobe Acrobat	iTunes
Adobe Bridge	Launchpad
Adobe Creative Cloud	macOS Sierra
Adobe Illustrator CC	Mail
Adobe Illustrator CC 2017	Maps
Adobe InDesign CC	Messages
Adobe InDesign CC 2017	Microsoft Excel
Adobe Photoshop CC 2017	Microsoft OneNote
App Store	Microsoft Outlook
Automator	Microsoft PowerPoint
Calculator	Microsoft Word
Calendar	Mission Control
Cannon Utilities	Notes
Chess	Pantone Center Manager
Contacts	Photo Booth
Dashboard	Photos
Dictionary	Preview
Dropbox	QuickTime Player
DVD Player	Reminders
EFI	Safari
FaceTime	Spotify
Fiery	Stickies
Fiery Software Uninstaller	Stuffit Archive Manager
Font Book	Stuffit Deluxe 16.0
Game Center	Stuffit Destinations
GarageBand	Stuffit Expander
Google Chrome	System Preferences
iBooks	TestifyViewer
Image Capture	Time Machine
	Utilities

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### Front Desk PC

Adobe Acrobat Reader DC	Intel Management Engine Components
Adobe Flash Player 33 NPAPI	Java 8 Update 45
AVG	Microsoft Office 365
AVG Protection	Microsoft Office 365 Business
CCleaner	Microsoft Silverlight
CyberLink Media Suite Essentials	Microsoft SQL Server 2005 Compact Edition
Dell Customer Connect	Microsoft Visual C + + Redistributables
Dell Product Registration	Microsoft Visual Studio 2010 Tools
Dell SupportAssist	Mozilla Firefox 47.0
Dell SupportAssistAgent	Mozilla Maintenance Service
Dell Update	OpenOffice 4.0.1
Dell WLAN and Bluetooth Client Installation	Realtek High Definition Audio Driver
DELLOSD	VIP Access
Dropbox	Visual Studio 2012 Redistributables
Google Chrome	Windows Essentials 2012
	Intel Graphics Driver

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### IT Desktop

7-Zip 16.04	Microsoft SQL Server 2016
Adobe Acrobat DC	Microsoft SQL Server 2016 ADOMD.NET
Adobe Creative Cloud	Microsoft SQL Server 2016 Analysis Management Objects
Adobe Flash Player 22 PPAPI	Microsoft SQL Server 2016 LocalDB
Adobe Illustrator CC 2017	Microsoft SQL Server 2016 Management Objects
Adobe InDesign CC 2017	Microsoft SQL Server 2016 Management Objects (x64)
Adobe Lightroom	Microsoft SQL Server 2016 Policies
Adobe Media Encoder CC 2017	Microsoft SQL Server 2016 T-SQL Language Service
Adobe Photoshop CC 2017	Microsoft SQL Server 2016 T-SQL Language Service
Adobe Premiere Pro CC 2017	Microsoft SQL Server 2016 T-SQL ScriptDom
Android SDK Tools	Microsoft SQL Server Compact 4.0 SP1 x64 ENU
Application Insights Tools for Visual Studio 2015	Microsoft SQL Server Data Tools - Database Projects - Web in ...
Asmedia USB Host Controller Driver	Microsoft SQL Server Data Tools - enu (1 4.0.61021.0)
ASUS Product Register Program	Microsoft SQL Server Data Tools - Visual Studio 2015
BaDoink VR Player	Microsoft SQL Server Data-Tier Application Framework (x86)
BaDoinkVR Player	Microsoft SQL Server Management Studio - 16.5.3
Brackets	Microsoft SQL Server System CLR Types
Caesium version 1.7.0	Microsoft System CLR Types for SQL Server 2012
CCleaner	Microsoft System CLR Types for SQL Server 2012 (x64)
Citrix Online Launcher	Microsoft System CLR Types for SQL Server 2014
Clang with Microsoft CodeGen for Microsoft Visual Studio 20 ...	Microsoft System CLR Types for SQL Server 2014
ClickOnce Bootstrapper Package for Microsoft .NET Framewor ...	Microsoft System CLR Types for SQL Server 2014
Cyberduck	Microsoft System CLR Types for SQL Server 2016
Dropbox	Microsoft System CLR Types for SQL Server 2016
Entity Framework 6.1.3 Tools for Visual Studio 2015 Update 1	Microsoft Visual C++ 2005 Redistributable
FileZilla Client 3.24.0	Microsoft Visual C++ 2005 Redistributable
Git version 2.10.1	Microsoft Visual C+ + 2005 Redistributable (x64)
Google Chrome	Microsoft Visual C+ + 2005 Redistributable (x64)
GoToMeeting 8.2.0.6634	Microsoft Visual C+ + 2008 Redistributable - x64 9.0.30729.17
IIS 10.0 Express	Microsoft Visual C++ 2008 Redistributable - x64 9.0.30729.61 ... Microsoft Corporation
IIS Express Application Compatibility Database for x64	Microsoft Visual C+ + 2008 Redistributable - x86 9.0.30729.17 Microsoft Corporation
IIS Express Application Compatibility Database for x86	Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.61 ... Microsoft Corporation
IIS URL Rewrite Module 2	Microsoft Visual C++ 2010 x64 Redistributable - 10.0.40219
Intel(R) Network Connections 20.2.4001.0	Microsoft Visual C+ + 2010 x86 Redistributable - 10.0.40219
Intel® Management Engine Components	Microsoft Visual C++ 2010 x86 Runtime - 10.0.40219 Microsoft Corporation
Intel® Security Assist	Microsoft Visual C+ + 2012 Redistributable (x64) - 11.0.51106 Microsoft Corporation



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Java SE Development Kit 7 Update 55	Microsoft Visual C++ 2012 Redistributable (x64) - 11.0.61030 Microsoft Corporation
Microsoft .NET Core 1.0.1 - SDK 1.0.0 Preview 2-003131 (x64)	Microsoft Visual C++ 2012 Redistributable (x86) - 11.0.61030 Microsoft Corporation
Microsoft .NET Core 1.0.1 - VS 2015 Tooling Preview 2	Microsoft Visual C++ 2013 Redistributable (x64) - 12.0.30501 Microsoft Corporation
Microsoft .NET Framework 4.5 Multi-Targeting Pack	Microsoft Visual C++ 2013 Redistributable (x86) - 12.0.30501 Microsoft Corporation
Microsoft .NET Framework 4.5.1 Multi-Targeting Pack	Microsoft Visual C++ 2015 Redistributable (x64) - 14.0.24215 Microsoft Corporation
Microsoft .NET Framework 4.5.1 Multi-Targeting Pack (ENU)	Microsoft Visual C++ 2015 Redistributable (x86) - 14.0.24215 Microsoft Corporation
Microsoft .NET Framework 4.5.1 SDK	Microsoft Visual Studio 2010 Shell (Integrated) - ENU Microsoft Corporation
Microsoft .NET Framework 4.6.1 Targeting Pack	Microsoft Visual Studio 2010 Shell (Isolated) - ENU Microsoft Corporation
Microsoft .NET Framework 4.6.1 Targeting Pack (ENU)	Microsoft Visual Studio 2010 Tools for Office Runtime (x64) Microsoft Corporation
Microsoft .NET Framework 4.6.2 SDK	Microsoft Visual Studio 2015 Shell (Isolated) Microsoft Corporation
Microsoft .NET Framework 4.6.2 Targeting Pack	Microsoft Visual Studio Enterprise 2015 with Updates Microsoft Corporation
Microsoft .NET Framework 4.6.2 Targeting Pack (ENU)	Microsoft Visual Studio Tools for Apache Cordova Microsoft Corporation
Microsoft .NET Version Manager (x64) 1.0.0-rc1	Microsoft Visual Studio Tools for Applications 2015 Microsoft Corporation
Microsoft AS OLE DB Provider for SQL Server 2016	Microsoft Visual Studio Tools for Applications 2015 Language ... Microsoft Corporation
Microsoft AS OLE DB Provider for SQL Server 2016	Microsoft Visual Studio Tools for Applications Design-Time 3.0 Microsoft Corporation
Microsoft Azure App Service Tools v2.9.6 - Visual Studio 2015	Microsoft Visual Studio Tools for Applications x64 Runtime 3.0
Microsoft Azure Authoring Tools - v2.9.5.1	Microsoft Visual Studio Tools for Applications x86 Runtime 3.0
Microsoft Azure Command Line Tools	Microsoft VSS Writer for SQL Server 2012
Microsoft Azure Compute Emulator - v2.9.5.1	Microsoft Web Deploy 3.6
Microsoft Azure Data Lake Tools for Visual Studio 2015	Microsoft Web Platform Installer 5.0
Microsoft Azure Libraries for .NET - v2.9	Mozilla Firefox 50.0.2 (x86 en-US)
Microsoft Azure Mobile App SDK V2.0	Mozilla Maintenance Service
Microsoft Azure PowerShell - January 2017	Node.js
Microsoft Azure Service Fabric	INVIDIA 30 Vision Controller Driver 369.04
Microsoft Azure Service Fabric SDK	INVIDIA 30 Vision Driver 378.92
Microsoft Azure Service Fabric Tools for Visual Studio 2015	INVIDIA GeForce Experience 3.4.0.70
Microsoft Azure Storage Emulator - v4.6	INVIDIA Graphics Driver 378.92
Microsoft Azure Storage Tools - v5.0.0	INVIDIA HD Audio Driver 1.3.34.23
Microsoft Azure Tools for Microsoft Visual Studio 2015 - v2.9	INVIDIA PhysX System Software 9.16.0318
Microsoft Help Viewer 1.1	Oculus
Microsoft Help Viewer 2.2	Prerequisites for SSDT
Microsoft ODBC Driver 13 for SQL Server	Prerequisites for SSDT
Microsoft Office 365 - en-us	Prerequisites for SSDT

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Microsoft Office Access database engine 2007 (English)	Python Tools 2.2.6 for Visual Studio 2015
Microsoft Office Developer Tools for Visual Studio 2015	RAD PDF
Microsoft OneDrive	Realtek High Definition Audio Driver
Microsoft Report Viewer 2012 Runtime	Respond us LockDown Browser 2
Microsoft Silverlight	Respond us LockDown Browser Lab OEM
Microsoft Silverlight 5 SDK	Share Point Client Components
Microsoft SQL Server 2008 R2 Management Objects	Share Point Client Components
Microsoft SQL Server 2008 Setup Support Files	Sonic Radar II
Microsoft SQL Server 2012 (64-bit)	SQL Server Browser for SQL Server 2012
Microsoft SQL Server 2012 Command Line Utilities	SQLRestore
Microsoft SQL Server 2012 Data-Tier App Framework	Sublime Text Build 3126
Microsoft SQL Server 2012 Management Objects	8 TeamViewer 12
Microsoft SQL Server 2012 Management Objects (x64)	Telerik UI for ASP.NET AJAX R3 2016 SP1
Microsoft SQL Server 2012 Native Client	Visual C++ for Mobile Development (Android support)
Microsoft SQL Server 2012 Policies	Visual C++ for Mobile Development (iOS support)
Microsoft SQL Server 2012 RS Add-in for SharePoint	Visual Studio 2010 Prerequisites - English
Microsoft SQL Server 2012 Setup (English)	VMware Horizon Client
Microsoft SQL Server 2012 Transact-SQL Compiler Service	Vulkan Run Time Libraries 1.0.39.1
Microsoft SQL Server 2012 Transact-SQL ScriptDom	WCF RIA Services V1.0 SP2
Microsoft SQL Server 2012 T-SQL Language Service	Windows Cache Extension 2.0 for PHP 7.1
Microsoft SQL Server 2014 Express LocalDB	Windows Cache Extension 2.0 for PHP 7.1 (x64)
Microsoft SQL Server 2014 Management Objects	Windows SDK AddOn
Microsoft SQL Server 2014 Management Objects (x64)	Windows Software Development Kit - Windows 10.0.10586.212
Microsoft SQL Server 2014 Transact-SQL ScriptDom	Windows Software Development Kit - Windows 10.0.14393.33
Microsoft SQL Server 2014 T-SQL Language Service	Windows Software Development Kit - Windows 10.0.26624
	Xamarin

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7-Zip 16.02	Microsoft SQL Server 2012 Policies
Adobe Acrobat DC	Microsoft SQL Server 2012 Setup (English)
AdobeAIR	Microsoft SQL Server 2012 Transact-SQL Compiler Ser
Adobe Bridge CC 2017	Microsoft SQL Server 2012 Transact-SQL ScriptDom
Adobe Creative Cloud	Microsoft SQL Server 2012 T-SQL Language Service
Adobe Flash Player 25 PPAPI	Microsoft SQL Server 2012 T-SQL Language Service
Adobe Fuse CC (Preview)	Microsoft SQL Server 2014 Express LocalDB
Adobe Illustrator CC 2017	Microsoft SQL Server 2014 Management Ob ects
Adobe In Design CC 2017	Microsoft SQL Server 2014 Management Objects (x64)
Adobe Media Encoder CC 2017	Microsoft SQL Server 2014 Transact-SQL ScriptDom
Adobe Photoshop CC 2017	Microsoft SQL Server 2014 T-SQL Language Service
Adobe Premiere Pro CC 2017	Microsoft SQL Server 2016
Advanced IP Scanner 2.4	Microsoft SQL Server 2016 ADOMO.NET
Advanced Port Scanner 2.4	Microsoft SQL Server 2016 Ana lysis Management Obj
Android SOK Tools	Microsoft SQL Server 2016 LocalDB
Apple Application Support (32-bit)	Microsoft SQL Server 2016 Mana9ement Objects
Apple Application Support (64-bit)	Microsoft SQL Server 2016 Management Objects (x64)
Apple Mobile Device Support	Microsoft SQL Server 2016 Policies
Apple Software Update	Microsoft SQL Server 2016 T-SQL Language Service
Application Insights Tools for Visual Studio 201 S	Microsoft SQL Server 2016 T-SQL Language Service
ASUS Live Update	Microsoft SQL Server 2016 T-SQL ScriptDom
ASUS PTP Driver	Microsoft SQL Server Compact 3.5 SP2 ENU
ASUS ROG Gaming Mouse	Microsoft SQL Server Compact 3 .5 SP2 x64 ENU
ASUS Splendid Video Enhancement Technology	Microsoft SQL Server Compact 4.0 SPI x64 ENU
ASUS USB Charger Plus	Microsoft SQL Server Data Too ls - Database Projects
ATK Package	Microsoft SQL Server Data Tools - enu (11.1.20627.00)
Audio Wizard	Microsoft SQL Server Data Tools - enu (14.0.60918.0)
AVG	Microsoft SQL Server Data Tools- Visual Studio 2015
AVG Protection	Microsoft SQL Server Data Tools Build Utilities - enu
Brackets	Microsoft SQL Server Data-Tier Application Framework
CCleaner	Microsoft SQL Server Management Studio - 16.3
Citrix Online launcher	Microsoft SQL Server System CLR Types
Clang with Microsoft CodeGen for Microsoft Visual St ...	Microsoft SQL Server System CLR Types (x64)
ClickOnce Bootstrapper Package for Microsoft .NET Fr ...	Microsoft System CLR Types for SQL Server 2012
Cyberduck	Microsoft System CLR Types for SQL Server 2012 (x64)
Cyberduck 19632 (4.9)	Microsoft System CLR Types for SQL Server 2014
CyberGhost 5	Microsoft System CLR Types for SQL Server 2014
DayZ	Microsoft System CLR Types for SQL Server 2016
Dead by Daylight	Microsoft System CLR Types for SQL Server 2016

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Device Setup	Microsoft Visual C + + 2005 Redistributable
Dropbox	Microsoft Visual C + + 2005 Redistributable
EaseUS Data Recovery Wizard	Microsoft Visual C++ 2005 Redistributable (x64)
EaseUS Partition Master 11 .0	Microsoft Visual C++ 2005 Redistributable (x64)
EaseUS Todo Backup Free 9.2	Microsoft Visual C++ 2008 Redistributable - x64 9.0.3
Entity Framework 6.1.3 Tools for Visual Studio 2015 U ...	Microsoft Visual C++ 2008 Redistributable - x64 9.0.3
Entity Framework Designer for Visual Studio 2012 - enu	Microsoft Visual C + + 2008 Redistributable - x86 9.0.2
Epson Customer Research Participation	Microsoft Visual C++ 2008 Redistributable - x86 9.0.3
Epson Event Manager	Microsoft Visual C++ 2008 Redistributable - x86 9.0.3
Epson FAX Utility	Microsoft Visual C++ 2008 Redistributable - x86 9.0.3
EPSON Scan	Microsoft Visual C++ 2010 x64 Redistributable - 10.0
EPSON WF-3640 Series Printer Uninstall	Microsoft Visual C++ 2010 x86 Redistributable - 10.0
Epson WF-3640 User's Guide version 1.0	Microsoft Visual C + + 2010 x86 Runtime - 10.0.40219
EpsonNet Print	Microsoft Visual C++ 2012 Redistributable (x64) – 11
FileZilla Client 3.21 .0	Microsoft Visual C++ 2012 Redistributable (x64) – 1
FormatFactory 3.9.5.0	Microsoft Visual C+ + 2012 Redistributable (x86) - 11
GameFirst IV	Microsoft Visual C+ + 2012 Redistributable (x86) - 11
Genesys USB Mass Storage Device	Microsoft Visual C+ + 2013 Redistributable (x64) - 12
Git version 2.10.1	Microsoft Visual C+ + 2013 Redistributable (x64) - 12
Go ToMeeting 8.2.0.6634	Microsoft Visual C+ + 2013 Redistributable (x86) - 12
H 1 Z 1: Just Survive	Microsoft Visual C+ + 2013 Redistributable (x86) - 12
H1Z1: King of the Kill	Microsoft Visual C+ + 2015 Redistributable (x64) - 14
Heaven Benchmark version 4.0	Microsoft Visual C+ + 2015 Redistributable (x86) - 14
HP Dropbox Plugin	Microsoft Visual Studio 2010 Shell (Integrated) - ENU
HP Google Drive Plugin	Microsoft Visual Studio 2010 Shell (Isolated) - ENU
HP OfficeJet Pro 871 O Basic Device Software	Microsoft Visual Studio 2010 Tools for Office Runtime
I.R.I.S. OCR	Microsoft Visual Studio 2015 Shell (Isolated)
iCloud	Microsoft Visual Studio Community 2015 with Updates
IIS 10.0 Express	Microsoft Visual Studio Enterprise 2015 with Updates
IIS Express Application Compatibility Database for x64	Microsoft Visual Studio Premium 2012
IIS Express Application Compatibility Database for x86	Microsoft Visual Studio Tools for Apache Cordova
Intel(R) Dynamic Platform and Thermal Framework	Microsoft Visual Studio Tools for Applications 2015
Intel(R) WiDi	Microsoft Visual Studio Tools for Applications 2015 La
Intel(R) Wireless Bluetooth(R)	Microsoft Visual Studio Tools for Applications Design
Intel® Graphics Driver	Microsoft Visual Studio Tools for Applications x86 Ru
Intel® Management Engine Components	Microsoft VSS Writer for SQL Server 2012
Intel® PROSet/Wireless Software	Microsoft Web Deploy 3.6
Intel ® Security Assist	Microsoft Web Deploy dbSqlPackage Provider - enu Microsoft Web Platform Installer 5.0
Intel® Serial 10	MockFlow Desktop UNKNOWN
iTunes	Movavi Video Converter 16 Movavi
Java 8 Update 91	Mozilla Firefox 51 .0.1 (x86 en-US) Mozilla

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Java SE Development Kit 7 Update 55	Mozilla Maintenance Service Mozilla
JetBrains ReSharper Ultimate in Visual Studio 2010	NetWitness Investigator PE 9.5 (remove only)
JetBrains ReSharper Ultimate in Visual Studio 2012	Nmap 7.12
JetBrains ReSharper Ultimate in Visual Studio 2015	Node.js
Killing Floor 2	NVIDIA Graphics Driver 368.81
Lorex_webplugin.exe version 3.1.0.5	NVIDIA PhysX System Software 9.16.0318
Microsoft .NET Core 1.0.0 - SOK Preview 2 (x64)	odrive
Microsoft .NET Core 1.0.1 - VS 2015 Tooling Preview	Oracle VM VirtualBox 5.0.24
Microsoft .NET Core 1.0.3 - SOK 1.0.0 Preview 2-00315	Paragon HFS+ for Windows™ 9.1
Microsoft .NET Core 1.1.0- SOK 1.0.0 Preview 2.1-003	PDFlib Block Plugin 5.0p1
Microsoft .NET Framework 4 Multi-Targeting Pack	PDFlib Block Plugin 5.1 Op 1
Microsoft .NET Framework 4.5 Multi-Targeting Pack	PPDJ:i-¥5.0
Microsoft .NET Framework 4.5 SOK	Prerequisites for SSDT
Microsoft .NET Framework 4.5.1 Multi-Targeting Pack	Prerequisites for SSDT
Microsoft .NET Framework 4.5.1 Multi-Targeting Pack	Prerequisites for SSDT
Microsoft .NET Framework 4.5.1 SOK	Project Felix
Microsoft .NET Framework 4.5.2 Multi-Targeting Pack	Python 3.5.2 (32-bit)
Microsoft .NET Framework 4.5.2 Multi-Targeting Pack	Python launcher
Microsoft .NET Framework 4.6 SOKm	Python Tools 2.2.5 for Visual Studio 2015
Microsoft .NET Framework 4.6 Targeting Pack	Razer Synapse
Microsoft .NET Framework 4.6 Targeting Pack (ENU)	Realtek Ethernet Controller Driver
Microsoft .NET Framework 4.6.1 SOK	Realtek High Definition Audio Driver
Microsoft .NET Framework 4.6.1 Targeting Pack	Respondus lockDown Browser 2
Microsoft .NET Framework 4.6.1 Targeting Pack (ENU)	ROG Gaming Center
Microsoft .NET Framework 4.6.2 SOK	Secure Download Manager
Microsoft .NET Framework 4.6.2 Targeting Pack	Skype™ 7.24
Microsoft .NET Framework 4.6.2 Targeting Pack (ENU)	Software Updater
Microsoft .NET Version Manager (x64) 1.0.0-rc1	Speccy
Microsoft AS OLE DB Provider for SQL Server 2016	Spotify
Microsoft AS OLE DB Provider for SQL Server 2016	SQL Server Browser for SQL Server 2012
Microsoft ASP.NET MVC 3	TAP-Windows 9.9.2
Microsoft ASP.NET MVC 4 Runtime	TeamViewer 12Telerik UI for ASP.NET AJAX Q2 2016 SP1
Microsoft ASP.NET Web Pages	Telerik UI for ASP.NET AJAX R3 2016 SP1
Microsoft Azure App Service Tools v2.9.5 - Visual Studio	USBPcap 1.1.0.0-g 794bf26-5
Microsoft Azure Authoring Tools - v2.8	Visual C++ for Mobile Development (Android support)
Microsoft Azure Authoring Tools - v2.9.5	Visual C++ for Mobile Development (iOS support)
Microsoft Azure Data Lake Tools for Visual Studio 2015	Visual Studio 2010 Prerequisites - English
Microsoft Azure libraries for .NET - v2.8	Visual Studio 2012 x64 Redistributables
Microsoft Azure libraries for .NET - v2.9	Visual Studio 2012 x86 Redistributables
Microsoft Azure Mobile App SOK V2.0	VLC media player

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Microsoft Azure PowerShell - September 2016	VMware Horizon Client
Microsoft Azure Quickstarts	Vulkan Run Time Libraries 1.0.11.1
Microsoft Azure Storage Emulator - v4.5	WCF RIA Services V1 .0 SP2
Microsoft Azure Storage Tools - v5.0.0	Windows 10 Upgrade Assistant
Microsoft Azure Tools for Microsoft Visual Studio 201	Windows Driver Package - ASUS (AsusPTPSGDrv) HID ...
Microsoft Azure Tools for Microsoft Visual Studio 201	Windows Essentials 2012
Microsoft Help Viewer 1.1	Windows SOK AddOn
Microsoft Help Viewer 2.0	Windows Software Development Kit - Windows 10.0.1...
Microsoft Help Viewer 2.2	Windows Software Development Kit - Windows 10.0.1...
Microsoft ODBC Driver 13 for SQL Server	Windows Software Development Kit - Windows 10.0.2 ...
Microsoft Office 365 - en-us	WinFlash
Microsoft OneDrive	WinHTirack Website Copier 3.48-22 (x64)
Microsoft Report Viewer 2012 Runtime	WinPcap 4.1.3
Microsoft Report Viewer for SQL Server 2016	Wireshark 2.2.0 (64-bit)
Microsoft SharePoint Designer 2013	Wondershare Video Converter Free(Build 6.0.1.0)
Microsoft Silverlight	xamarin
Microsoft Silverlight 4 SOK	XAMPP
Microsoft Silverlight 5 SOK	XSplit Gamecaster
Microsoft SQL Server 2005 Compact Edition	Microsoft SQL Server 2012 Data-Tier App Framework
Microsoft SQL Server 2008 R2 Management Objects	Microsoft SQL Server 2012 Express LocalDB
Microsoft SQL Server 2008 Setup Support Files	Microsoft SOL Server 2012 Management Objects
Microsoft SQL Server 2012	Microsoft SQL Server 2012 Management Objects (x64)
Microsoft SQL Server 201Command line Utilities	Microsoft SOL Server 2012 Native Client
	Microsoft SQL Server 2012 Data-Tier App Framework

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#### **Print Room PC #1**

Adobe Acrobat Reader DC	Lenovo Ustr Guide
AdobeAIR	Lores_webplugin exc ven,on 31.05
Adobe Flash Player ActiveX	Message Center Plus
Belken N600 DB USB Wireless Adapter	Microsoft .NET Framework
Bonjour	Microsoft Office
CCleaner	Microsoft Silverlight
Create Recovery Media	Microsoft Visual C++ Redistributables
DisplayCore Software	ONYX Printer & Profile Download Manager 20100602-0
D-link DFE-530TX+	PCM3.0Agcnt
Google Chrome	PosterShop
HP Button Manager	Power Manager
HP Webcam Software Suite	PowerDVD Create
Graphics Driver	Print Care Webcam
Intel Management Engine Components	Realtek Ethernet Controller All-In-One Windows Driver
Intel Rapid Storage I Technology	Realtek High Definition Audio Driver
Intel USB 3.0 ieXtensible Host Controller Onver	ShareFile Desktop
Java(TM) 6 Update JI	ThinkVantage Communications Utility
C Lenovo Reach	USB Enhanced Performance Keyboard
Lenovo Reg1strat1on	View Management Utility
Lenovo SHARErt	VuRoom
Lenovo Solution Center	WaveEditor
Lenovo System Update	Windows Driver Package – Inter Corporation
Lenovo USB Graphic	Windows Media Encoder 9 Series
Lenovo USB3 .0 to OVI VGA Monitor Adapter	Xetex Xebra Client

#### **4.3 Staff IT Skills/Training**

Elite Graphics employs six full time employees. As a functional structural organization, each one of these employees holds specific titles and job specifications. The full time employees and specifications are as follows:

- Dave Orwick – Owner; Graduated from Transylvania University with a Bachelor’s Degree in History
- Stan Sizemore -Operations and IT Manager; Bachelor’s Degree in Finance from Transylvania
- Derek Merriman - Graphic Designer; Bachelor’s Degree in Graphic Design

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- Steve Smith – Pressman, Shredder, Deliverer; Self-Taught
- Darin Killum – Print Pressman; Self-Taught
- Zack Orwick – Graphic Design, Web Development; Bachelor’s in Computer Information Systems to be received Spring 2017

#### **4.4 IT Budgeting and Spending**

Elite budgets no more than upwards of \$35,000 per year for its information technology development. This figure is used largely in to servicing and maintaining existing equipment. Very little of this allotment is used for the purchasing of new equipment as the computer hardware and software it currently has is more than efficient to produce the products it sells to its customers.

### **5. Envisioned IT Capabilities**

#### **5.1 Leadership’s Vision**

The following is a direct quote from the owner of Elite Graphics, LLC: “I see a bright future for Elite Graphics as we continue to expand our offerings into niche markets. Growing a business in a mature market that is changing rapidly due to technology is challenging. Though there is a shift from paper printing to digital print, Elite is positioning itself to embrace this new market environment. By adding tools to our company such as shredding and web marketing, we can become a complete one source for our customers. As my competition continues to lack diversification, staying in the same depressed and shrinking lanes of business, Elite sees it future growth in embracing new technology and diversification in areas such as shredding. Elite will be rolling out programs to entice our customers to utilize our “cradle to grave” mentality where we can supply paper products, shredding and recycling, and ultimately



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selling the recycled goods as raw material back to the open market. This allows several various lines of revenue while having a small carbon footprint on the environment that we live in.”

Owner, Elite Graphics LLC – Dave Orwick

## **5.2 Top 10 Technology Issues**

### **1. Low Upload and Download Capability**

Several years ago Elite Graphics, LLC used Windstream as their primary internet provider. Windstream offered minimal pricing, but Elite soon found that they could not provide it with the necessary speed to run Elite’s printing systems as efficiently or effectively as possible. Elite searched for other options. They looked into Time Warner Cable; it provided fast enough speeds, but didn’t provide service area. Elite soon settled on using Wimax as their primary means of internet service. Wimax was offered by QX.net It provides Elite with both phone and internet services. It provides 10MBPS download speeds with upload speeds up to 5 MBPS which doesn’t always meet the daily needs of Elite.

### **2. Lack of Browser Support for Print System**

Elite Graphic’s print system provider for all business was built over three years ago by a third-party company. It acts a medium between Elite and online customers, allowing customers to customize their products and tailor those orders to each company’s individual needs, using Microsoft Silverlight as its operating platform. Its primary purpose is to take inputs from the customer (such as business name, phone number, address, etc.) and create a pdf which populates their information in the format which

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the customer has chosen. This product is used to generate a series of products such as business cards, brochures, pamphlets, etc. The problem that is arising is that newer internet browsers, such as Google Chrome and Mozilla Firefox only minimally supports the Microsoft Silverlight platform. In the upcoming versions of these browsers, it is likely that there will be no support for this platform at all. This would force Elite to invest in a new print system provider.

### **3. No Integration Between Software**

This same print system mentioned in #2 of the Top 10 Technological issues for Elite Graphics, LLC has no interaction with the Xebra Accounting software. This means that every time an order is placed using the print system, an employee must then input the order information into Xebra. Elite would save more time and money implementing a system which automatically takes an incoming order and populates the order data (name, order details, credit card information, etc.) and populates that information and data into the accounting program.

### **4. Lack of Hard Drive Backups**

A significant concern at Elite Graphics, LLC is that not all computers are backed up, meaning that if a computer were to crash, the files on those computers would be lost with no way to recover them. The same would be the case if any of the computers were to become infected by a virus, or if the hard drive failed, received physical computer damage or if the physical computer was stolen.

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## **5. Decentralized Servers**

Elite Graphics, LLC does not host their own servers on site. This is due to three primary reasons: 1) It is costlier to maintain a centralized database, 2) Decentralized databases are stored in several servers in separate locations, so there are multiple backups, and 3) Elite does not currently have enough bandwidth to maintain an on-site server. These decentralized servers are hosted by third-party internet-based companies. The issue with this is that if Elite loses internet connectivity, it essentially loses all ability to process orders and therefore make sales.

## **6. Lack of Security Footage**

Elite has secured its physical location by installing working security cameras which feed to monitors in Elite's building. This camera footage is stored locally in a hard drive. The problem is that this footage is only stored for a week. This is a huge security threat because sometimes the threats that a company faces aren't revealed until months or maybe even years later. If Elite were to find that they had been under threat for years, then they will have no way of producing evidentiary support for their claims.

## **7. Lack of Accounting Software Access**

The Xebra accounting software is a very limiting application for Elite Graphic's, LLC because it will only allow three individual users to have concurrent access. So, not only does this system lack integration between the printing orders software and itself, but it also significantly limits the ability for the handful of interns working at Elite to simultaneously input sales and expenses into the system. This inhibits timeliness and the

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overall effectiveness of Elite's human capital.

## **8. Global Network for Multiple Businesses**

There are three businesses in the same building which houses Elite Graphics, LLC: Elite Graphics, Cascades, and Wildcat Shredding. These three businesses share network connects for both intranet and extranet. This is dangerous because if any person without proper credentials were to gain access to any of these networks, that same individual would have access to all three networks. This is a serious security threat to all three businesses. If an unauthorized individual had access to these networks, and any passwords were saved in the browsing cache, the individual would have access to all the saved passwords, and therefore access to all customer information (including credit cards). By not implementing a division of networks for all three businesses Elite Graphics is leaving itself open to potential hacking.

## **9. No Virtual Private Network**

Often Elite employees will receive calls from customers while they are out of the office. In such situations, it would be ideal for Elite employees to have access to their customer orders and profiles so that they can relay information about client's orders to the clients. But because there is no Virtual Private Network established for Elite Graphic's this is impossible. An employee must be on site, at their computer to access client information. The ability to have access to this information would give employees the ability to relay it to customers at any point in time.

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## **10. Different Versions of Microsoft Office**

Although the interference caused by the differing versions of Microsoft Office isn't the most crucial of technological issues, it still poses a nuisance for Elite Graphic's employees. Some employees are using Microsoft 365 while others are using Microsoft 2015. This causes differences in formatting when one file of a Microsoft product is sent to a computer with a different version. Furthermore, this prevents Microsoft Outlook from being able to automatically backup emails and attachments. Losing those emails could be detrimental to Elite's business.

## **6. Closing the Gap**

### **6.1 Converting the Order Process and Accounting to Web Platform Using MVC**

As of now, there is a disconnect between the orders being processed online and the Xebra accounting system. Furthermore, the accounting system limits the number of user to three contemporaneous users. This problem can be fixed by implementing a web based platform using MVC. MVC is a form of web programming which combines HTML, CSS, and C#. The HTML allows one to format the structure of the site, the CSS allows one to format the style of the site, and the C# enables one to program all the business logic on the backend of the website. Using MVC, the order process as well as the accounting process can be integrated as one system. When a user enters their data and selects the type of order they want to purchase, that data will be transferred to two pages: the purchase order page and the accounting page. The purchase order page would include the personal data entered by the user to be printed as well as the type of order the

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customer is submitting. Simultaneously the business logic will be implemented, and depending on the order, the costs and revenues generated from the user's selection will be populated into a table on the accounting page.

## **6.2 Implement Security System with Enough Memory to Hold Footage for No Less than a Year**

For the time being, Elite Graphic's, LLC is using a security system which holds camera footage for only a week. This is unacceptable. For example, let's say an employee who has access to Elite's systems accesses the Accounting application and misrepresents costs and expenses (skimming cash off the top), and continues this periodically every other week for a year. The owner finally notices that funds are missing. If that employee had last laundered money a week and a half ago, there would be no surveillance to use as evidentiary support, as the camera system only retains footage for the last week. Instead, Elite should invest in an external hard drive which would hold the camera footage for at least one year, so any uncouth business practices will be monitored and retained long enough to be uncovered and reviewed.

## **6.3 Detach the Network for All Businesses within the Building into Individual Networks**

At this time, there is a serious security threat for Elite Graphics, LLC because it conducts business on the same intranet and extranet with the other businesses within the building. This allows the possibility for an individual or employee with access to the network to gain access to Elite's files and do serious damage. By separating the universal network into three individual networks for the businesses this would negate the ability for an individual outside of Elite Graphics to gain access to Elite's files. Furthermore, as

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the Owner of Elite Graphics, Dave Orwick has a significant interest in all three businesses, this would minimize his threat in all businesses.

#### **6.4 Establish a Virtual Private Network**

Currently, if an employee in charge of an account is out of the office and a customer calls in regard to their order, the company phone system will forward the call to the employee's cell phone. Though this gets the customer in contact with the employee who is accountable for their account, the employee has no access to their account or order information. So unless the employee can recall the specific information pertaining to that customer's order(s), the customer will be left without answers until the following morning when the employee returns to the office. This could adversely affect the client's opinion of Elite's business practices and whether they will continue to use the business for future orders. Instead, Elite should implement a Virtual Private Network which will allow employees to gain access to the company's server and access all files pertaining to its clients. This would save the client's time by have quick access to their order information and save Elite money by better ensuring that customers return to Elite for future printing orders.

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## **6.5 Establish Backups for All Computers**

Elite Graphics, LLC currently has no backups for any of its computer files. This is a serious threat because if any computer were to crash, experience hardware failure, or be stolen all the data associated with these computers would be lost as well. This would mean Elite Graphics would no longer have any information about their clients or their past orders To solve this problem, Elite Graphics should set up an account through Google Drive and house all of their customer files in the cloud. Cloud storage would allow employees to gain file access from almost any location. Additionally, cloud storage is scalable so as Elite's data grows so would the available storage space in the cloud. Furthermore, cloud storage guarantees security for its users and ensures its data won't be lost by housing it on several servers.

## **7. Conclusions**

Elite Graphics, LLC's success thus far has been due to its ability to adapt to the changing technological environment while providing excellent customer service. But there is still room for growth and development. There are several technological issues inhibiting this corporation from reaching its maximum potential. By implementing the changes listed in the aforementioned section of this document, Elite Graphics will undoubtedly become more Elite than it has ever been.

## **8. Appendices**

### **8.1 Basis of Analysis**

The basis of my analysis for this strategic assessment has been derived from several



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theories which were described in detail in my Computer Information System Capstone class this semester. One model which was applicable to this assessment was Cash's Organizational

In addition to Cash's organizational model, Porter's Five Forces were used to determine Elite Graphic's Interindustry Competitive Analysis.

### **Cash's Organizational Model**

#### *Environment*

Cash's organizational model illustrates all aspects of a business from the environment in which it exists down to the people who work for the organization. In this model, the environment in which the business operates should have a direct effect on the organizational strategy of the company. That strategy should, in turn, influence the organization's structure. This structure will effect the type of information technology the organization implements. This technology will impact what jobs are made available at the organization. Finally, the jobs available will directly determine who works at the organizations.

#### *Generic Strategy*

Elite Graphics, LLC is located in Lexington, KY. Lexington is the second largest metropolitan area in Kentucky. While being a metropolitan area, Lexington has used a significant amount of money to keep the city "green", as a large part of the city's income is based around equestrian activities. According to Cash's model, these two factors should influence Elite Graphic's organizational strategy. The fact that Lexington is a metropolitan area means that Elite Graphic's should market itself as a big business. If Elite appears as though it is one of the most prominent and successful printers in the area, this will attract business. Likewise, as Lexington harbors a "green" theme, if Elite Graphics were to appear as an

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environmentally friendly corporation, this may also attract customers.

### *Organizational Structure*

If Elite Graphic's strategy is to appear as one of the most successful printing businesses in the area, its organizational structure should reflect that. It is in Elite Graphic's best interest to attract customers with as many options as possible. Differentiation would be ideal generic strategy for Elite Graphic's to implement. Differentiated corporations are characterized my core product lines that split to attact as many customers as possible. It produces many things organized around product lines. These products are not commodities, and is driven by markets. Though there may be many products similar to the ones produced by a differentiated organization, the organization's products must have a differing feature or service to set itself apart from others in the market. Such a company tries to build relationships with its customers in the hopes of repeat purchasing behavior. Also, this type of organization is price indifferent, meaning that even if the price increases slightly, the customer will still buy its product.

### *Jobs & People*

- Dave Orwick – Owner
- Stan Sizemore – Operations Manager
- Zack Orwick – IT Manager/ Developer
- Derek Merriman – Graphic Designer
- Darin – Print Pressmen
- Steve Smith – Pressman, Shredder, Deliverer

### **Porter's Five Forces**

- Threat of New Entrants: Low

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- Because the commercial printing equipment is so costly, the barriers to enter this market are high. The exit barriers are low. Hence, the threat of new entrants in the market is low overall.
- Threat of Substitutes: High
  - Due to the number of internet-based printing companies, Elite Graphic's customers have many other options when it comes to their printing needs. Elite Graphic's relies on their impeccable customer service to retain their customers. Hence, the threat of substitutes is high.
- Degree of Rivalry: Low
  - There are very few corporations in the area who are capable of providing such a wide range of printing options. Hence, the degree of rivalry is low.
- Bargaining Power of Customers: High
  - Customers have several other options as far as where to purchase prints. Because of the substitutes they have available, their degree of bargaining power is high.
- Bargaining Power of Suppliers: Low
  - Elite Graphic's suppliers are in competition with many other suppliers of printers, printing materials, ink, etc. Because of this competition, the bargaining power of the suppliers is low.

## 8.2 Top 10 Technology Issues

1. Low Upload and Download Capability
2. Lack of Browser Support for Print System

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3. No Integration Between Software
4. Lack of Hard Drive Backups
5. Decentralized Servers
6. Lack of Security Footage
7. Lack of Accounting Software Access
8. Global Network for Multiple Businesses
9. No Virtual Private Network
10. Different Versions of Microsoft Office

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