**Department of Information Systems**

**Projects in Information Systems INFO465**

**Business Case Proposal**

**Robotic Process Automation Workflow**

**for VDOT’s Strategic Contract System**

**4/30/2020**

**Spring 2020**

# Project Overview

## Purpose

* This project will use Robotic Process Automation to translate VDOT’s comment resolution forms into entries in their strategic contract system’s database. The project team will work with the Virginia Department of Transportation(VDOT) to develop the prototype. Project goals and components have been identified below.

## Primary Business Process for Improvement

* VDOT uses manual entry to input data from a comment resolution form into an excel spreadsheet, and then into another internal form
* This is a problem because in translation, numbers and words can be changed, which is a litigation issue
* The proposed technology to fix this is Robotic Process Automation (RPA)
* RPA is well known form reducing human error, reducing labor costs, and increasing the speed of processes
* It is a simple solution to implement because it only does what the programmer tells it to do, and there is little to no error of incorrect translation
* There are several RPA softwares on the market, the most popular are:
  + UiPath RPA
  + Automation Anywhere
  + WinAutomation
  + Blue Prism
  + Nintex RPA
  + electroNeek RPA
  + IBM RPA with Automation Anywhere
  + tagUI

## Project Goals, Strategies, and Deliverables

* Find an ideal cloud based technology to help organizations share and collaborate seamlessly
* Use Robotic Process Automation that provides a software platform to help VDOT automate their business process
* Create a fully automated workflow, from scraping the comment resolution form, to handling back and forth process, to archiving submittals.
* Use Sharepoint online to create workflow, and include processes like approving comments, and automatically downloading files on Sharepoint
* Become familiar with all the technologies associated with this project

# Project Description

## Project Use Case

The prototype that we are going to build is a strategic contract system encompassing VDOT. VDOT is primarily looking for a way to diminish user manual entry and instead scrape data from a document/pdf and archive the data into a database automatically. The requirements are to use a cloud based technology such as Sharepoint to seamlessly collaborate and create a beginning to end workflow from email to database. The prototype should be flexible to support updated information daily and handle continuous data pull.

## Project Components

The project will target x components. These components will be produced by the VCU team and VDOT associates.

* Solution and Data Architecture Models: Design documents and architectural designs for solutions, data flows, and data management.
* Data Integrations: All information will be uploaded to a test SQL database, and oracle server in preparation for integration with the legacy system. Documents will be provided by the VDOT team as a sample of what the system may encounter through its use.
* Prototype RPA workflow and archive: File standards-based metadata for prototype and archive all documents.
* Governance and Security Documentation: Documents outlining governance model and compliance with security protocols.

## Project Milestones

This section lists the major project milestones and their target completion dates.

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| --- | --- |
| **Milestones/Deliverables** | **Target Date** |
| **Business Case Proposal** | 1/23/2020 |
| Business Analysis Summary | 1/30/2020 |
| Report on Stakeholder Engagement | 2/6/2020 |
| **Requirements and Acceptance Criteria** | 2/13/2020 |
| Solutions Architecture/Flow Diagrams | 2/20/2020 |
| ERD for Logical Data Model | 2/27/2020 |
| **MIDTERM Report** | 3/5/2020 |
| Review Coding Structure | 3/19/2020 |
| Review Data Management System | 3/26/2020 |
| UI/UX with Process Flow | 4/2/2020 |
| Review of ETLs and Live Data Loads | 4/9/2020 |
| Test of Machine-level Functionality | 4/16/2020 |
| **Final User Acceptance Testing and Acceptance Criteria** | 4/23/2020 |
| **Project Report and Solution Delivery** | 4/20/2020 |

# Project Team

The project team will be formed from student interns in the Department of Information Systems at Virginia Commonwealth University, with direction from VDOT. The project team will consist of the following members:

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| --- | --- | --- |
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*Note: The project will be completed under the Commonwealth Data Internship Program, with student interns from the VCU Department of Information Systems. The project will be at zero cost to the Commonwealth of Virginia, nor will there be remuneration for the student interns engaged in project activities.*