

Oakland County

Department of Information Technology

Project Scope and Approach

Project Name: Health Document Management & E-Signature System

Project ID: D99161DM

| | | | |
|---|---|--|----------------------------|
| Leadership Group: Finance/Administration | | | |
| Department: Health & Human Services | | Division: Admin | |
| Project Sponsor: Leigh-Anne Stafford | | Date Requested: 2/26/18 | PM Customer No. 161 |
| Request Type: <u>New Development</u> Enhancement Customer Support Planned System Maintenance or Upgrade | | | |
| IT Team Name: Assessing and Taxation | | IT Team No: 9 | |
| Project Manager/Leader: Scott Kaiser | | | |
| Account Number: 96842 | Account Description: Health Administration | Customer Name: | Health |
| Grant Funded? Yes <u>No</u> | | Mandate? Yes <u>No</u> Mandate Source: | |

Project Goal

To implement a system to store all policy, procedure, and historic documents, as well as allow recipient electronic signature of distributed materials, provide reports to show non-compliant staff within the various units, access materials as needed for FOIA requests so that we are compliant with State mandates, and potentially integrate with Accela.

Business Objective

Increase efficiency by reducing staff time on printing and filing paper documents.

Major Deliverables

- Detailed Project Plan
- Application and/or System Requirements
- End User Hardware and Software Requirements Document
- Technical Design Document
- Technical Architecture Diagram
- Training Plan
- User Acceptance Test Plan
- Implementation Plan
- Implemented document storage and dissemination solution
- Training/User Manual(s)
- Service Level Agreement
- Disaster Recovery Toolkit
- Service Center Knowledge Documents

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Approach

- Develop Detailed Project Plan
- Review current business process and conduct needs assessment with customer, ensuring current manual processes are refined and automated.
- Document system requirements
- Determine and document system architecture and diagram
- Assess User Hardware and Software Requirements
- Conduct Tech Review
- Develop Implementation Plan
- Configure new system
- Develop User Acceptance Test Plan
- Test new system
- Acquire User Acceptance Sign off
- Conduct Change Control
- Develop User Documentation, SLA, Disaster Recovery Toolkit, Service Center Knowledge Documents
- Train users on new system
- Release new system into production

Research & Analysis

Gartner Research Recommendation

- Examine e-signature use cases for business value, and consider both short- and long-term document creation, workflow and management requirements.
- Identify the jurisdictional requirements for each use case and select products that can integrate digital certificates to comply with national regulations, as needed.
- Evaluate each applicable business process to determine the need for native management and workflow capabilities, as well as integration with COTS applications (such as CRM and contract life cycle management systems) or custom-built applications via APIs.

Benefits

See Return on Investment (ROI) Analysis Document

Impact

Number of Users: 400 employees

Divisions: Health Division

Leadership Groups: Finance and Administration

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Risk

Business Environment Medium - Project will require some changes to existing business processes.

Technical Environment Medium - Previously implemented technologies with new aspects and/or new requirements.

Assumptions

Staffing IT Staffing: resources will be available for the hours indicated per the attached project plan.

Other Staffing: additional staffing will be available as follows:

| <u>Role:</u> | <u>Name</u> | <u>Hours per Day</u> |
|---------------------|---------------------|-----------------------------|
| Project Sponsor: | Leigh-Anne Stafford | As Needed |

Facilities

- TBD

Technical

- LaserFiche will be considered as a solution for this project. Functionality would be configured under our existing enterprise license.
- Health staff would be managing document scanning or any file uploads.

Funding

- Information Technology

Other

- N/A

Priority

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- TBD

Constraints

- N/A

Exclusions

- N/A

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PROJECT PHASE AUTHORIZATION

| | |
|--|-------------------|
| Phase(s): All | |
| Total Estimated Application Services | Hours: 788 |
| Total Estimated Technical Systems | Hours: 94 |
| Total Estimated CLEMIS | Hours: |
| Total Estimated Internal Services | Hours: |
| IT Application Services Division Manager Approval: | Date: |
| IT Technical Systems Division Manager Approval: | Date: |
| IT CLEMIS Division Manager Approval: | Date: |
| IT Internal Services Division Manager Approval: | Date: |
| IT Management Approval: | |
| Approved: Yes No | Date: |
| Reason: | |
| Project Sponsor Approval: | |
| Title: | Date: |

PROJECT SUMMARY

| | | |
|--|-------------------|------------------------|
| Authorized Development (see above) | Hours: | |
| Preliminary Estimated Development for Future Phases | Hours: | |
| Grand Total Estimated Development | Hours: 882 | Cost: \$145,530 |

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Project Name: Health Document Management & E-Signature System

Project ID: D99161DM

PROJECT COMPLETION AUTHORIZATION

| | |
|--|-------|
| Customer Acceptance of Product: | |
| Title: | Date: |
| Project Office Review: | Date: |

Health Doc Management & E-Signature System - Size Estimate (+/- 10% to 50%)

| | | | | | |
|----|-------|--------|------------------------------|-----------|----------------|
| 1 | Type | ID | Task Name | Estimated | Estimate Notes |
| 2 | | | | Hours | |
| 3 | 3 | 000000 | PROJECT MANAGEMENT | 243 | |
| 4 | Phase | 100000 | DEVELOP RFP & SELECT VENDOR | | |
| 5 | Phase | 200000 | BUSINESS REQUIREMENTS | 123 | |
| 6 | Phase | 300000 | DESIGN SYSTEM ARCHITECTURE | 136 | |
| 7 | Phase | 400000 | IMPLEMENT VENDOR APPLICATION | 231 | |
| 8 | Phase | 500000 | IMPLEMENTATION PHASE | 112 | |
| 9 | Phase | 600000 | POST IMPLEMENTATION SUPPORT | 37 | |
| 10 | | | | 882 | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Project Summary

| Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Total |
|---|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| Benefits/Savings: | | | | | | | |
| Tangible Benefits Subtotal: | 2,710 | 2,710 | 2,710 | 2,710 | 2,710 | 2,710 | 16,260 |
| Cost Avoidance Subtotal: | 56,789 | 57,925 | 59,083 | 60,265 | 61,470 | 62,700 | 358,232 |
| Costs: | | | | | | | |
| Development Services Subtotal: | 147,410 | 5,610 | 12,210 | 5,610 | 12,210 | 5,610 | 188,660 |
| Hardware Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Software Subtotal: | 140,000 | 140,000 | 140,000 | 140,000 | 140,000 | 140,000 | 840,000 |
| Infrastructure Subtotal: | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 11,412 |
| Training Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other Subtotal: | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Annual Statistics: | | | | | | | |
| Annual Total Savings | 59,499 | 60,635 | 61,793 | 62,975 | 64,180 | 65,410 | 374,492 |
| Annual Total Costs | 289,312 | 147,512 | 154,112 | 147,512 | 154,112 | 147,512 | 1,040,072 |
| Annual Return on Investment | (229,813) | (86,877) | (92,319) | (84,537) | (89,932) | (82,102) | (665,580) |
| Annual Costs/Savings Ratio | 486.25% | 243.28% | 249.40% | 234.24% | 240.12% | 225.52% | |
| Project Cumulative Statistics: | | | | | | | |
| Cumulative Total Savings | 59,499 | 120,134 | 181,927 | 244,902 | 309,082 | 374,492 | 374,492 |
| Cumulative Total Costs | 289,312 | 436,824 | 590,936 | 738,448 | 892,560 | 1,040,072 | 1,040,072 |
| Cumulative Return on Investment | (229,813) | (316,690) | (409,009) | (493,546) | (583,478) | (665,580) | (665,580) |
| Cumulative Cost/Savings Ratio | 486.25% | 363.61% | 324.82% | 301.53% | 288.78% | 277.73% | 277.73% |
| Year Positive Payback Achieved | | | | | | | NO PAYBACK |
| State or Federal Mandate? | | | | | | | |
| Signatures: | | | | | | | |
| Benefits Reviewed By Project Sponsor | | | | Date: | | | |
| Costs (including IT Resources) Reviewed By Information Technology Project Manager | | | | Date: | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Savings Detail

| Benefit/Savings Description | Project Savings Category | Budget Category/Funding Source | Unit Desc | Units | Rate per Unit | Total Savings | Annual Multiplier |
|---|--------------------------|--------------------------------|-----------|-------|---------------|---------------|-------------------|
| Elimination of Lektriever | Tangible Benefit | | | 5 | 100 | 500 | |
| Office supplies reduction (file folders, binders, jump drives) | Tangible Benefit | | | 2,000 | 1 | 2,000 | |
| Reduction in file boxes sent to Record Retention | Tangible Benefit | | | 30 | 7 | 210 | |
| Elimination of time spent on locating correctly or incorrectly filed documents. This time will be adjusted to another project. (4,000 FOIA's at 20 minutes FOIA) | Cost Avoidance | | | 1,333 | 25 | 33,325 | 1.020 |
| Provides instant access for administration to view documentation instead of waiting for the paperwork to be retrieved, copied and delivered | Intangible Benefit | | | | | 0 | 1.020 |
| Labor savings in EH staff time to locate documents in Lektriever | Cost Avoidance | | | 104 | 20 | 2,080 | 1.020 |
| Clerical time to pull files from Lektriever, scan, attach to E-Health, then refile | Cost Avoidance | | | 1,040 | 20 | 20,592 | 1.020 |
| The Lekrievers are old and the automatic feature to move the files breaks causing staff to hand-crank the shelves to find files which is physically tiring and takes double the time. | Cost Avoidance | | | 40 | 20 | 792 | 1.020 |
| | | | | | | 0 | |
| | | | | | | 0 | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Savings Detail

| Benefit/Savings Description | Project Savings Category | Affects Project ROI? | | | | | | Potential Savings Extensions | | | | | |
|---|--------------------------|----------------------|----|----|----|----|----|------------------------------|-----------|-----------|-----------|-----------|--------|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Elimination of Lektriever | Tangible Benefit | X | X | X | X | X | X | 500.00 | 500.00 | 500.00 | 500.00 | 500.00 | 500 |
| Office supplies reduction (file folders, binders, jump drives) | Tangible Benefit | X | X | X | X | X | X | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000.00 | 2,000 |
| Reduction in file boxes sent to Record Retention | Tangible Benefit | X | X | X | X | X | X | 210.00 | 210.00 | 210.00 | 210.00 | 210.00 | 210 |
| Elimination of time spent on locating correctly or incorrectly filed documents. This time will be adjusted to another project. (4,000 FOIA's at 20 minutes FOIA) | Cost Avoidance | x | x | x | x | x | x | 33,325.00 | 33,991.50 | 34,671.33 | 35,364.76 | 36,072.05 | 36,793 |
| Provides instant access for administration to view documentation instead of waiting for the paperwork to be retrieved, copied and delivered | Intangible Benefit | | | | | | | | | | | | |
| Labor savings in EH staff time to locate documents in Lektreiver | Cost Avoidance | x | x | x | x | x | x | 2,080.00 | 2,121.60 | 2,164.03 | 2,207.31 | 2,251.46 | 2,296 |
| Clerical time to pull files from Lektriever, scan, attach to E-Health, then refile | Cost Avoidance | x | x | x | x | x | x | 20,592.00 | 21,003.84 | 21,423.92 | 21,852.40 | 22,289.44 | 22,735 |
| The Lekrievers are old and the automatic feature to move the files breaks causing staff to hand-crank the shelves to find files which is physically tiring and takes double the time. | Cost Avoidance | x | x | x | x | x | x | 792.00 | 807.84 | 824.00 | 840.48 | 857.29 | 874 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Savings Summary

| Benefit/Savings Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Total |
|---|---------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Tangible Benefit: | | | | | | | |
| Elimination of Lektriever | 500 | 500 | 500 | 500 | 500 | 500 | 3,000 |
| Office supplies reduction (file folders, binders, jump drives) | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 2,000 | 12,000 |
| Reduction in file boxes sent to Record Retention | 210 | 210 | 210 | 210 | 210 | 210 | 1,260 |
| <i>Tangible Benefits Subtotal:</i> | 2,710 | 2,710 | 2,710 | 2,710 | 2,710 | 2,710 | 16,260 |
| Cost Avoidance: | | | | | | | |
| Elimination of time spent on locating correctly or incorrectly filed documents. This time will be adjusted to another project. (4,000 FOIA's at 20 minutes FOIA) | 33,325 | 33,992 | 34,671 | 35,365 | 36,072 | 36,793 | 210,218 |
| Labor savings in EH staff time to locate documents in Lektreiver | 2,080 | 2,122 | 2,164 | 2,207 | 2,251 | 2,296 | 13,121 |
| Clerical time to pull files from Lektriever, scan, attach to E-Health, then refile | 20,592 | 21,004 | 21,424 | 21,852 | 22,289 | 22,735 | 129,897 |
| The Lekrievers are old and the automatic feature to move the files breaks causing staff to hand-crank the shelves to find files which is physically tiring and takes double the time. | 792 | 808 | 824 | 840 | 857 | 874 | 4,996 |
| <i>Cost Avoidance Subtotal:</i> | 56,789 | 57,925 | 59,083 | 60,265 | 61,470 | 62,700 | 358,232 |
| Intangible Benefit: | | | | | | | |
| Provides instant access for administration to view documentation instead of waiting for the paperwork to be retrieved, copied and delivered | | | | | | | |
| Savings Total: | 59,499 | 60,635 | 61,793 | 62,975 | 64,180 | 65,410 | 374,492 |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Budget Category/Funding Source | Unit Desc | Units | Rate per Unit | Total Cost | Annual Multiplier | Affects Project ROI? | | | | | |
|---|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|----------------------|----|----|----|----|----|
| | | | | | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| IT Hours - New Development | Development Svcs | | HR | 882 | 165 | 145,530 | | x | | | | | |
| IT Hours - System Maintenance | Development Svcs | | HR | 10 | 165 | 1,650 | | x | x | x | x | x | x |
| IT Hours - Customer Support | Development Svcs | | HR | 24 | 165 | 3,960 | | x | x | x | x | x | x |
| IT Hours - Planned Maintenance | Development Svcs | | HR | 40 | 165 | 6,600 | | | x | | | x | |
| User Hours - New Development | Development Svcs | | | | | 0 | | | | | | | |
| User Hours - PTNE/OT | Development Svcs | | | | | 0 | | | | | | | |
| Contractor Professional Services | Development Svcs | | HR | 10 | 188 | 1,880 | | x | | | | | |
| PC System - Acquisition | Hardware | | | | 814 | 0 | | | | | | | |
| PC System - Maintenance | Hardware | | | | 2,304 | 0 | | | | | | | |
| Notebook - Acquisition | Hardware | | | | 1,223 | 0 | | | | | | | |
| Notebook - Maintenance | Hardware | | | | 2,372 | 0 | | | | | | | |
| Tablet Notebook - Acquisition | Hardware | | | | 2,012 | 0 | | | | | | | |
| Tablet Notebook - Maintenance | Hardware | | | | | 0 | | | | | | | |
| Laserprinter - Acquisition | Hardware | | | | 1,432 | 0 | | | | | | | |
| Laserprinter - Maintenance | Hardware | | | | 1,104 | 0 | | | | | | | |
| Image Workstations - Acquisition | Hardware | | | | | 0 | | | | | | | |
| Image Workstations - Maintenance | Hardware | | | | 3,496 | 0 | | | | | | | |
| PC Maintenance User Owned | Hardware | | | | 2,304 | 0 | | | | | | | |
| Printer Maintenance User Owned | Hardware | | | | 1,072 | 0 | | | | | | | |
| File Space (100GB) | Hardware | | ANN | | 173 | 0 | | | | | | | |
| Internet Bandwidth per MB | Hardware | | ANN | | 750 | 0 | | | | | | | |
| Package Software - Acquisition | Software | | EA | 400 | 350 | 140,000 | | x | | | | | |
| Package Software - Maintenance | Software | | EA | 400 | 350 | 140,000 | | | x | x | x | x | x |
| Business Objects Access | Software | | | | | 0 | | | | | | | |
| Term Emulation SFTW-Acquisition | Software | | | | | 0 | | | | | | | |
| Term Emulation SFTW-Maintenance | Software | | | | | 0 | | | | | | | |
| Server - Acquisition/Upgrade | Infrastructure | | | | 8,000 | 0 | | | | | | | |
| Server - Maintenance | Infrastructure | | | | 360 | 0 | | | | | | | |
| Server Sftwre - Acquisition/Upgrade | Infrastructure | | | | 335 | 0 | | | | | | | |
| Server Sftwre - Maintenance | Infrastructure | | | | | 0 | | | | | | | |
| Server Rack Mount | Infrastructure | | | | 400 | 0 | | | | | | | |
| Oracle Enterprise Per Processor - Includes Year 1 Maintenance | Infrastructure | | | | 21,372 | 0 | | | | | | | |
| Oracle Enterprise Per Processor - Year 2 and Beyond | Infrastructure | | | | 3,432 | 0 | | | | | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Budget Category/Funding Source | Unit Desc | Units | Rate per Unit | Total Cost | Annual Multiplier | Affects Project ROI? | | | | | |
|---|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|----------------------|----|----|----|----|----|
| | | | | | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 24,533 | 0 | | | | | | | |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 20,759 | 0 | | | | | | | |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 16,985 | 0 | | | | | | | |
| SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond | Infrastructure | | | | 4,218 | 0 | | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 6,398 | 0 | | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 5,414 | 0 | | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | 4,429 | 0 | | | | | | | |
| SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond | Infrastructure | | | | 1,100 | 0 | | | | | | | |
| Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance | Infrastructure | | | | 3,506 | 0 | | | | | | | |

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Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Budget Category/Funding Source | Unit Desc | Units | Rate per Unit | Total Cost | Annual Multiplier | Affects Project ROI? | | | | | |
|--|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|----------------------|----|----|----|----|----|
| | | | | | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond | Infrastructure | | | | 701 | 0 | | | | | | | |
| Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance | Infrastructure | | | | 13,180 | 0 | | | | | | | |
| Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond | Infrastructure | | | | 2,635 | 0 | | | | | | | |
| SSL Certificate | Infrastructure | | | | 845 | 0 | | | | | | | |
| Internet Access | Infrastructure | | | | 180 | 0 | | | | | | | |
| Imperva Web Application Firewall (External Web Applications Only) | Infrastructure | | ANN | | 500 | 0 | | | | | | | |
| App Code Directories on Consolidated IIS Server (Virtual) | Infrastructure | | ANN | | 415 | 0 | | | | | | | |
| Database (5 GB) on Consolidated SQL Instance Server | Infrastructure | | ANN | | 930 | 0 | | | | | | | |
| Database Instance (125 GB DB) on Consolidated SQL Server | Infrastructure | | ANN | | 2,395 | 0 | | | | | | | |
| Database SQL Maint Server | Infrastructure | | ANN | | 834 | 0 | | | | | | | |
| Database SQL Server Physical | Infrastructure | | ANN | | 19,158 | 0 | | | | | | | |
| DB Maintenance (Annual Cycle \$610) | Infrastructure | | ANN | | 610 | 0 | | | | | | | |
| DB Maintenance (Semi-Annual Cycle \$1220) | Infrastructure | | ANN | | 1,220 | 0 | | | | | | | |
| DB Maintenance (Semi-Annual Cycle \$2440) | Infrastructure | | ANN | | 2,440 | 0 | | | | | | | |
| Dedicated Virtual Server | Infrastructure | | ANN | | 4,150 | 0 | | | | | | | |
| DB Instance Setup | Infrastructure | | | | 976 | 0 | | | | | | | |
| DBA MS SQL Database Creation on Existing Instance | Infrastructure | | | | 366 | 0 | | | | | | | |
| Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$601 On Premise Physical Server = N/A | Infrastructure | | ANN | | | 0 | | | | | | | |

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|--|-----------------------|--------------------------------|-----------|-------|---------------|------------|-------------------|----------------------|----|----|----|----|----|
| | | | | | | | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$951 On Premise Physical Server = \$9,288 | Infrastructure | | ANN | 2 | 951 | 1,902 | | x | x | x | x | x | x |
| Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$1,702 On Premise Physical Server = \$9,751 | Infrastructure | | ANN | | | 0 | | | | | | | |
| Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$3,167 On Premise Physical Server = \$10,446 | Infrastructure | | ANN | | | 0 | | | | | | | |
| Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$7,564 On Premise Physical Server = \$12,906 | Infrastructure | | ANN | | | 0 | | | | | | | |

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Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Potential Cost Extensions | | | | | |
|---|-----------------------|---------------------------|------------|------------|------------|------------|------------|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| IT Hours - New Development | Development Svcs | 145,530.00 | | | | | |
| IT Hours - System Maintenance | Development Svcs | | 1,650.00 | 1,650.00 | 1,650.00 | 1,650.00 | 1,650.00 |
| IT Hours - Customer Support | Development Svcs | | 3,960.00 | 3,960.00 | 3,960.00 | 3,960.00 | 3,960.00 |
| IT Hours - Planned Maintenance | Development Svcs | | | 6,600.00 | | 6,600.00 | |
| User Hours - New Development | Development Svcs | | | | | | |
| User Hours - PTNE/OT | Development Svcs | | | | | | |
| Contractor Professional Services | Development Svcs | 1,880.00 | | | | | |
| PC System - Acquisition | Hardware | | | | | | |
| PC System - Maintenance | Hardware | | | | | | |
| Notebook - Acquisition | Hardware | | | | | | |
| Notebook - Maintenance | Hardware | | | | | | |
| Tablet Notebook - Acquisition | Hardware | | | | | | |
| Tablet Notebook - Maintenance | Hardware | | | | | | |
| Laserprinter - Acquisition | Hardware | | | | | | |
| Laserprinter - Maintenance | Hardware | | | | | | |
| Image Workstations - Acquisition | Hardware | | | | | | |
| Image Workstations - Maintenance | Hardware | | | | | | |
| PC Maintenance User Owned | Hardware | | | | | | |
| Printer Maintenance User Owned | Hardware | | | | | | |
| File Space (100GB) | Hardware | | | | | | |
| Internet Bandwidth per MB | Hardware | | | | | | |
| Package Software - Acquisition | Software | 140,000.00 | | | | | |
| Package Software - Maintenance | Software | | 140,000.00 | 140,000.00 | 140,000.00 | 140,000.00 | 140,000.00 |
| Business Objects Access | Software | | | | | | |
| Term Emulation SFTW-Acquisition | Software | | | | | | |
| Term Emulation SFTW-Maintenance | Software | | | | | | |
| Server - Acquisition/Upgrade | Infrastructure | | | | | | |
| Server - Maintenance | Infrastructure | | | | | | |
| Server Sftwre - Acquisition/Upgrade | Infrastructure | | | | | | |
| Server Sftwre - Maintenance | Infrastructure | | | | | | |
| Server Rack Mount | Infrastructure | | | | | | |
| Oracle Enterprise Per Processor - Includes Year 1 Maintenance | Infrastructure | | | | | | |
| Oracle Enterprise Per Processor - Year 2 and Beyond | Infrastructure | | | | | | |

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Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Potential Cost Extensions | | | | | |
|---|-----------------------|---------------------------|----|----|----|----|----|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server Enterprise - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server Enterprise - Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond | Infrastructure | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2016-Aug 2017 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2017-Aug 2018 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server Standard - Per Processor (4 cores) - Purchased Sept 2018-Aug 2019 - Includes Maintenance thru Aug 2019 | Infrastructure | | | | | | |
| SQL Server - Standard Maintenance, Per Processor (4 cores) - Sept 2019 and Beyond | Infrastructure | | | | | | |
| Websphere Basic Per Processor Single/Dual Core - Includes Year 1 Maintenance | Infrastructure | | | | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Potential Cost Extensions | | | | | |
|--|-----------------------|---------------------------|----|----|----|----|----|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Websphere Basic Per Processor Single/Dual Core - Year 2 and Beyond | Infrastructure | | | | | | |
| Websphere ND Per Processor Single/Dual Core - Includes Year 1 Maintenance | Infrastructure | | | | | | |
| Websphere ND Per Processor Single/Dual Core - Year 2 and Beyond | Infrastructure | | | | | | |
| SSL Certificate | Infrastructure | | | | | | |
| Internet Access | Infrastructure | | | | | | |
| Imperva Web Application Firewall (External Web Applications Only) | Infrastructure | | | | | | |
| App Code Directories on Consolidated IIS Server (Virtual) | Infrastructure | | | | | | |
| Database (5 GB) on Consolidated SQL Instance Server | Infrastructure | | | | | | |
| Database Instance (125 GB DB) on Consolidated SQL Server | Infrastructure | | | | | | |
| Database SQL Maint Server | Infrastructure | | | | | | |
| Database SQL Server Physical | Infrastructure | | | | | | |
| DB Maintenance (Annual Cycle \$610) | Infrastructure | | | | | | |
| DB Maintenance (Semi-Annual Cycle \$1220) | Infrastructure | | | | | | |
| DB Maintenance (Semi-Annual Cycle \$2440) | Infrastructure | | | | | | |
| Dedicated Virtual Server | Infrastructure | | | | | | |
| DB Instance Setup | Infrastructure | | | | | | |
| DBA MS SQL Database Creation on Existing Instance | Infrastructure | | | | | | |
| Extra Small - 2 Core 8GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$601 On Premise Physical Server = N/A | Infrastructure | | | | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Cost Detail

| Cost Description | Project Cost Category | Potential Cost Extensions | | | | | |
|--|-----------------------|---------------------------|----------|----------|----------|----------|----------|
| | | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 |
| Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$951 On Premise Physical Server = \$9,288 | Infrastructure | 1,902.00 | 1,902.00 | 1,902.00 | 1,902.00 | 1,902.00 | 1,902.00 |
| Medium - 8 Core 32GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$1,702 On Premise Physical Server = \$9,751 | Infrastructure | | | | | | |
| Large - 16 Core 64GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$3,167 On Premise Physical Server = \$10,446 | Infrastructure | | | | | | |
| Extra Large - 40 Core 160GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$7,564 On Premise Physical Server = \$12,906 | Infrastructure | | | | | | |

Oakland County -- Health Document Management & E-Signature System

Return on Investment Analysis

Cost Summary

| Cost Description | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Total |
|--|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Development Services: | | | | | | | |
| IT Hours - New Development | 145,530 | | | | | | 145,530 |
| IT Hours - System Maintenance | | 1,650 | 1,650 | 1,650 | 1,650 | 1,650 | 8,250 |
| IT Hours - Customer Support | | 3,960 | 3,960 | 3,960 | 3,960 | 3,960 | 19,800 |
| IT Hours - Planned Maintenance | | | 6,600 | | 6,600 | | 13,200 |
| User Hours - New Development | | | | | | | |
| User Hours - PTNE/OT | | | | | | | |
| Contractor Professional Services | 1,880 | | | | | | 1,880 |
| <i>Development Services Subtotal:</i> | 147,410 | 5,610 | 12,210 | 5,610 | 12,210 | 5,610 | 188,660 |
| Hardware: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Hardware Subtotal:</i> | | | | | | | |
| Software: | | | | | | | |
| Package Software - Acquisition | 140,000 | | | | | | 140,000 |
| Package Software - Maintenance | | 140,000 | 140,000 | 140,000 | 140,000 | 140,000 | 700,000 |
| | | | | | | | |
| <i>Software Subtotal:</i> | 140,000 | 140,000 | 140,000 | 140,000 | 140,000 | 140,000 | 840,000 |
| Infrastructure: | | | | | | | |
| Small - 4 Core 16GB RAM, 500GB Drive, 10 GB NIC - Cloud/Virtual = \$951 On Premise Physical Server = \$9,288 | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 11,412 |
| | | | | | | | |
| <i>Infrastructure Subtotal</i> | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 1,902 | 11,412 |
| Training: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Training Subtotal:</i> | | | | | | | |
| Other: | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| <i>Other Subtotal:</i> | | | | | | | |
| Costs Total: | 289,312 | 147,512 | 154,112 | 147,512 | 154,112 | 147,512 | 1,040,072 |

Return on Investment Analysis

Assumptions

[illegible]