InITIAM  
Proposal for Services

For the department of Information Technology

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# Overview

InITIAM is pleased to submit this proposal for services supporting Walker Company in achieving its goals of improving its technology management and visibility, providing training, and post-sales support for its new IT Asset Management (IAM) solution. We have brought value to hundreds of medium sized organizations and are committed to continuing excellence.

## Problem Statement

With the digital age of information allowing and encouraging organizations to geographically decentralize and work remotely, unprecedented challenges being presented for I.T. Geographically distanced assets mean greater security risk, handicapped visibility and monitoring capabilities, as well decreased management abilities. Now, as Walker Company has begun adopting remote work policy, these challenges have arrived at their doorstep.

## Customer Summary

Walker Company is a medium sized organization which is increasingly seeing its employees working from home, while maintaining the responsibility of provisioning technology resources each worker. Securing, managing, and analyzing these technology assets had previously been relatively simple when bounded by their 3 office buildings, each with their own I.T. team. Now, with remote workers often living in differing states, it has become infeasible for IT to continue their practices without altering their approach to doing so.

## System Analysis

Currently Walker Company’s I.T. department is equipped to handle in person hardware provisioning and maintenance, as well as remote desktop software maintenance. Knowledge of hardware, software, and user usage is kept through various spreadsheets and personnel experience. There is currently no platform for automating software installation. Instead I.T. coordinates with each user or department to remotely install, configure, and maintain necessary software.

Upon project completion, Walker Company desires to automate hardware, software, and user usage data collection as well as provide visual representations for data analysis and prediction. The solution must be founded upon an automatic updating platform so that the I.T. department can easily deploy new functionality such as software automation, consolidating remote desktop functionality, or antivirus capabilities. These are examples of future projects that can be pursued solo by Walker Company, or in a separately contracted project.

## The Objective

* Need #1: Automate hardware, software, and user data collection
* Need #2: Create a secure user portal to interface with the IAM
* Need #3: Visually represent collected data in charts for analysis and prediction
* Need #4: Create a platform for distributing automatic updates.
* Need #5: Allow the provisioning of differing versions depending on the user or department’s needs.

## The Solution

* Recommendation #1: Develop two client background Windows services: a controller service and a worker service.
* Recommendation #2: Develop a web server that will receive and serve data.
* Recommendation #3: Configure and populate a database server to store data, maintain it, and serve it to the web server
* Recommendation #4: Develop a secure web portal for administrators to graphically log in and view data representations and perform future maintenance functions.

# Our Proposal

Walker Company has a well-deserved reputation for quality customer service. However, faced with changes in distribution systems, monitoring capabilities, and asset management that prevent taking full advantage of improvements in technology, Walker Company faces the possibility of decreasing sales revenues due to the inability to effectively leverage the technology assets currently employed.

We have developed solutions to help businesses stay ahead of the constantly evolving world of technology and propose that Walker Company implement an IT Asset Management solution initially focused on asset monitoring, data visualization, and update distribution. Our solution provides a foundation on which to build IT’s future services and can enable Walker Company to fully realize the benefits of improved service throughout the entire lifecycle of technology assets. Most importantly, we provide the training and support for this new solution that ensures your staff can ramp up quickly and realize concrete improvements in customer satisfaction and service provision.

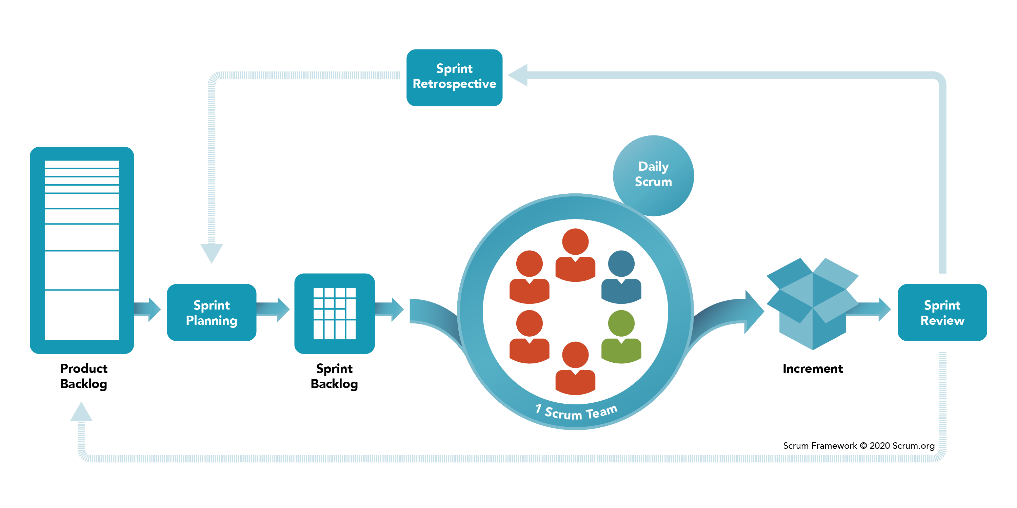
## Data

Asset data is to be collected through the deployment of the InIT client background Windows services. The IAM service will collect computer and software data through Windows Management Instrumentation (WMI) API calls. After organizing the data into a CSV format, it will be posted to the web server which will parse and clean the data before storing it in the database.

InITIAM will consider the unknown. If incomplete data is posted, then depending on the level of missing data, it will either post the partial data or none. Data outliers should not present a problem because the outliers will be important to note and record for IT’s knowledge.

## Project Methodology

Walker Company I.T. has previously indicated a certain level of uncertainty in the requirements for InITIAM. Due to not wanting to decide on the full scope of functionality that InITIAM should provide, they would like to focus on building an upgradeable foundation on which they can analyze their asset data to make the best decisions on what functionality should be pursued next. At InITIAM, we understand the constantly evolving nature of technology and ever-present uncertainty generated from that evolution. Therefore, the Scrum methodology, a subset of Agile, has been selected for the development of this InITIAM solution.

Agile methodologies focus on releasing a minimally useful product, as quickly as possible, and then iteratively improving it with high levels of feedback from the product owner. Scrum builds on Agile, breaking the project down into periodic ‘sprints’, and tackling only one sprint at a time which typically last two to four weeks. Organizing these sprints falls on the Scrum master, who adopts a sort of project manager role, being sole interface between the programming team and the product owner.

*Figure 1: Scrum Diagram. Retrieved from https://www.scrum.org/resources/what-is-scrum*

The goal of sprints is to produce a key part of the product and maximize development productivity. The product owner organizes the product backlog to prioritize the most important features, which are then selected for the sprint by the Scrum master. Each day a 15-minute scrum meeting is held with the Scrum master, product owner, and development team. The development team selects items from the sprint backlog to work on that day, while the scrum master proceeds to coach, mentor, and run interference for the development team. The development team, while building the product also builds the tests involved. Once the sprint has concluded, the product is deployed.

There is no active tester role in the Scrum methodology. While the nature and complexity of a project may dictate the need for a dedicated test team, usually testing is performed by the developers with a unit test. The unit test will include testing for security, usability, functionality, and performance.

The nature of this InITIAM project lends itself to the Scrum methodology in that our goal is releasing a minimally useful foundation that provides only most important functional needs. In addition, the various components such as the background services, web server, and user interface, lend themselves very well to the framework of Scrum sprints. The final benefit this project hopes to realize is laying a solid foundation for any future contracted additions to the IAM by the InITIAM development team.

## Execution Strategy

Our execution strategy incorporates proven methodologies, extremely qualified personnel, and a highly responsive approach to managing deliverables. Following is a description of our project methods, including how the project will be developed, a proposed timeline of events, and reasons for why we suggest developing the project as described.

## Project Outcomes

Following is a complete list of product deliverables:

|  |  |
| --- | --- |
| Product Deliverables | Description |
| InITIAM Service Program | Development of the InITIAM background client Windows service. |
| InITManager Service Program | Development of the InITManager background client Windows service. This will function as the controller of the primary InITIAM service. |
| InITUpdate Program | This executable will implement the mechanism that will communicate with the web server, stop the services, uninstall the services, install the provided updates, and restart the services all automatically without the user’s knowledge. |
| Windows Application Installer | Provide an executable for manual installation of InITIAM, InITManager, and InITUpdate, as well as an MSI for automated installations. |
| Web Server | A web server, hosting apache 2.4.29, configured with the domain of <https://initiam.net> |
| Database Server | A MySQL database server, version 14.14, hosted on the same machine as the web server. |
| Web Portal | A secure authentication page that redirects to the InITIAM administrator dashboard |
| InITIAM Administrator Dashboard | A user interface within the Web Portal that will display the collected computer and software data in 3 pre-configured charts. |
| InITIAM Forecasting Dashboard | A user interface within the Web Portal that will display current Disk Space usage trends and allow the user to forecast Disk Capacity being reached based on current rate of change or increased/decreased rate of change. |
| Logs | Logs will be provided for each product deliverable, except the Windows Application Installer. |

|  |  |
| --- | --- |
| Project Deliverables | Description |
| Administrator Training | A half day of administrator training will be provided for I.T. personnel on the client, web server, database, and web portal services. |
| Professional Support | Completion of this project will result in a contracted 12-month term of professional support during business hours. May be upgraded to 24/7 at negotiated premium price. |
| Documentation | Documentation, written by developers and reviewed by the scrum master and product owner, will be delivered for each product deliverable. |

## Evaluation Plan

To consider these product outcomes successfully delivered, they must meet the requirements and needs of the client. Below are the steps that will be taken to verify those requirements are satisfied.

To achieve the completion of a Scrum sprint, the totality of the project must pass the simultaneously developed unit test. It is estimated that there will be four sprints, and so upon completion of the final sprint the application code will be considered successfully developed. The unit test will test for code security, usability, functionality, and performance.

After the final unit test succeeds, final product testing will commence prior to implementation. To initiate final product testing, a test system with 3 virtual machines running on varying hardware configurations will be created. The following tests will have to meet the described criteria to pass.

|  |  |
| --- | --- |
| Test | Success Criteria |
| Use the Windows Application Installer to install InITIAM on all 3 virtual machines | The Windows Application Installer successfully runs InITManager, InITIAM, and InITUpdate’s /Install function with no errors.  The Windows Application Installer successfully runs InITManager and InITIAM’s /Start function with no errors. |
| Record computer, software, and user logs for 48 hours. | The logs are recorded with no service failures or gaps of coverage. |
| Deploy a new version of InITManager and InITIAM services. | The clients should show a version higher than the previous version in logs and the registry. |
| Authenticate to the Web Portal | Improper username will be used and should cause authentication failure.  Improper password will be used and should cause authentication failure.  Proper username and password will be used and should cause authentication success, redirecting user to the administrator dashboard. |
| Verify the 3 preconfigured charts show accurate data | View charts and cross reference with manually checked hardware and software information on virtual machines. Information must match. |
| Use the Windows Application Installer to uninstall InITIAM on all 3 virtual machines | The Windows Application Installer will successfully run InITManager, InITIAM, and InITUpdate’s /Uninstall function with no errors. |

## Implementation Plan

Once the product has been developed and deployed, production implementation can begin. Implementation will be accomplished in two phases. Phase 1 will consist of a small set of pilot assets, while Phase 2 will consist of the entirety of the organization’s assets.

#### Phase 1

Phase 1 will focus on the implementation on a small set of five pilot assets from differing locations. This will help flush out any unexpected issues with the implementation, limiting their affect to a small and manageable scope. The tests to ensure a successful Phase 1 implementation will be:

* Computer, software, and user logging will carry on uninterrupted for 48 hours.
* Deployment of an update, incrementing software version by .1, will be successfully carried out and verified in the logs and registry of clients.
* Three I.T. administrators from different office locations will successfully authenticate to the web portal.
* I.T. will ensure accurate dashboard data representations.
* I.T. will ensure accurate disk usage forecast for all three machines based on the 48 hours of logged data.

|  |  |
| --- | --- |
| Phase 1 Deliverables | Description |
| Issue Log | A log of issues which will include causes, descriptions, prevention methods, and solutions. |
| Increased Confidence | Phase 1 will result in increased confidence in the Phase 2 implementation. |
| Administrator Training | Administrator training will take place after successful Phase 1 tests have been completed. |

#### Phase 2

Phase 2 will be the production implementation. The knowledge and experience gained from Phase 1 will be applied to the successful rollout of the InITIAM solution to all Walker Company technology assets. The tests to ensure success of Phase 2 will be like Phase 1, however will encompass all the technology assets and I.T. administrators.

* Computer, software, and user logging will carry on uninterrupted for 48 hours.
* Deployment of an update, incrementing software version by .1, will be successfully carried out and verified in the logs and registry of all clients.
* All I.T. administrators will successfully authenticate to the web portal.
* I.T. will approve accurate dashboard data representations.
* I.T. will approve accurate disk usage forecast for all three machines based on the 48 hours of logged data.

|  |  |
| --- | --- |
| Phase 2 Deliverables | Description |
| Issue Log | A log of issues which will include causes, descriptions, prevention methods, and solutions. |
| Organization-Wide Asset Visibility | I.T. will have an organization-wide view of their assets’ hardware, software, and user data. |
| Ability to Upgrade Functionality | Upon the successful completion of implementation Phase 2, Walker Company will be able to begin developing new functionality for their new IAM or contracting new development to InITIAM. |

## Timeline for Execution

This project will begin with the Scrum master assembling his development team and scheduling a project kickoff meeting with the Product Owner and any additional Walker Company personnel that would like to further understand this project’s scope and timeline. The following day, the first Scrum meeting will take place, marking the beginning of the first sprint which will primarily be configuration and framework setup. Further sprints will be determined by the product owner, Scrum master, and development team. Upon completion of the final sprint, final product testing will commence. Once product testing has completed successfully, then Phase 1 of the implementation plan will begin execution. Upon successful completion of Phase 1, Phase 2 will begin. When Phase 2 is successfully completed, there will be a project review meeting to analyze our successes, failures, and what can be improved in the next project. The project will then be considered finished.

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Start Date | End Date | Duration |
| Project Kickoff | 05/03/2021 | 05/03/2021 | 1 hour |
| Sprint 1: Configuration and Framework Setup | 05/03/2021 | 05/14/2021 | 2 weeks |
| Sprint 1: Unit Test | 05/12/2021 | 05/14/2021 | 3 days |
| Sprint 2: TBD | 05/17/2021 | 05/28/2021 | 2 weeks |
| Sprint 2: Unit Test | 05/26/2021 | 05/28/2021 | 3 days |
| Sprint 3: TBD | 05/31/2021 | 06/11/2021 | 2 weeks |
| Sprint 3: Unit Test | 06/09/2021 | 06/11/2021 | 3 days |
| Sprint 4: TBD | 06/14/2021 | 06/25/2021 | 2 weeks |
| Sprint 4: Unit Test | 06/23/2021 | 06/25/2021 | 3 days |
| Product Testing | 06/28/2021 | 07/02/2021 | 5 days |
| Implementation: Phase 1 | 07/05/2021 | 07/09/2021 | 5 days |
| Implementation: Phase 1 – Administrator Training | 07/12/2021 | 07/12/2021 | 4 hours |
| Implementation: Phase 2 | 07/12/2021 | 07/16/2021 | 5 days |
| Project Review | 07/19/2021 | 07/19/2021 | 1 hour |
| Project Complete |  | 07/19/2021 | 11 weeks |

# Expected Results

We expect our proposed solution to meet Walker Company’s requirements by providing the following results:

## Financial Benefits

* Result #1: Greater organizational agility to respond to the evolving market and environment, therefore creating the ability to capitalize on opportunities to increase market share.
* Result #2: I.T. personnel and assets will do more, for less.

## Technical Benefits

* Result #1: Increased quality of service due to visibility into assets and their trends
* Result #2: Increased customer satisfaction due to decreased down time
* Result #3: Greater efficiency in utilization of limited I.T. personnel resources.

# Pricing

The following table details the pricing for delivery of the services outlined in this proposal. This pricing is valid for 60 days from the date of this proposal:

|  |  |  |  |
| --- | --- | --- | --- |
| **Personnel** | **Quantity (hours)** | **Price** | **Total** |
| Planning and Design | x10 | $45 | $450 |
| Development | x80 | $90 | $7200 |
| **Licensing** | **Quantity** | **Price** | **Total** |
| Canvas JS (Charting) | x1 (license) | $400 | $400 |
| **Services** | **Quantity** | **Price** | **Total** |
| Training | x4 | $120 | $480 |
| Professional Support | X12 (month) | $200 | $2400 |
|  |  |  | **$10930** |

# Qualifications

InITIAM was founded by Collin Walker who received his bachelor’s in computer science from Western Governors University. He worked as database administrator for his local municipality for five years, which included the COVID-19 pandemic. During this time, Collin and his IT team increasingly saw users working remotely, including themselves, and faced many new challenges. Collin’s experience and personal understanding of medium sized organization’s needs led to the creation of InITIAM. Since then, InITIAM has seen nation-wide adoption by 20+ municipalities, 132 companies, and 20 non-profit organizations. InITIAM’s focus on agility, visibility, and efficiency has put IT back in the hands of management for thousands. We hope you will trust us to deliver the same value, sought by so many others.

# Conclusion

We look forward to working with Walker Company and supporting your efforts to improve your asset management and visibility through our InITIAM IT Asset Management software, training, and support services. We are confident that we can meet the challenges ahead and stand ready to partner with you in delivering an effective I.T. support solution.

If you have questions on this proposal, feel free to contact Collin Walker at your convenience by email at cwal159@wgu.edu. We will be in touch with you next week to arrange a follow-up conversation on the proposal.

Thank you for your consideration,

Collin Walker  
InITIAM C.E.O.