UBC Social Ecological Economic Development Studies (SEEDS) Student Report

Centre for Sustainable Information Management: A Business Plan

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Executive Summary

The University of British Columbia (UBC) Vancouver has grown immensely in the past ten years, as evidenced by its visible densification. Concurrently, the volume of documents produced by UBC Vancouver has grown more than eight times (Doyle A. , 2009). Over 40,000 boxes of documents are stored by the faculties, departments and schools at UBC Vancouver. The question is: where are these documents stored?

Currently there are two locations: on-campus in store-rooms, basements and attics and off-campus at privately owned facilities, Iron Mountain (IM) and BC Records Management Services (BCRMS). Unfortunately, there are several problems with these locations.

On campus storage space is valuable and in short supply. This space has value as potential classroom or research space. In addition, many of these documents are not well managed; for instance, some have expired, need to be destroyed or may be valuable archives to be retained.

Off campus storage is expensive. For example, UBC spent nearly $190,000 on document storage at IM (Wilson, 2011) in 2010. Furthermore, storing documents off-campus at facilities owned by US companies (like IM) makes the documents susceptible to inspection by Homeland Security. Off-campus storage is also not sustainable. Over 100 tonnes of greenhouse gas emissions is produced by off-campus storage (Jackson, et al. 2009).

The solution to these problems is for UBC to construct their own information management and storage facility: the **UBC Centre for Sustainable Information Management** (CSIM). The CSIM will provide all UBC Vancouver schools, faculties, and departments with a storage facility that is safe, convenient, cost-efficient, sustainable, and knowledgeable of UBC record policies. The CSIM will act as a world-leading research centre for records/documents management.

The design of the CSIM building will be Gold Leadership in Energy and Environmental Design (LEED) certified. The facility will store all UBC documents that need to be retained, according to a newly mandated, university policy. When the retention period is over, notice will be given and the documents will be destroyed in a secure and environmentally friendly way. Document scanning and data tape storage services will also be provided. The CSIM will ensure that documents are not sent to a third party, such as US Homeland Security. Security, trustworthiness and sustainability are the CSIM's highest priorities.

Being an on-campus facility, the CSIM significantly reduces delivery distance and therefore significantly reduces greenhouse gas emissions. Also, lean in organization, the CSIM will have two faculty members who are experts in information management and two to four support staff. Faculty members will provide specialized consulting services to faculties, schools and departments on campus. They will also be actively researching sustainable information management practices.

The CSIM will be a profit centre while being carbon-neutral. Profits of $53,000 will be earned in year three and $128,000 will be earned in year five. All profits from the CSIM will be reinvested back into the facility to help the CSIM expand from being a record storage facility to become a pioneering research centre for sustainable archival technology.

The UBC Centre for Sustainable Information Management will make UBC a world leader in this growing field. Although data storage is on the rise, the need for hard copy documents will continue to be relied upon for many years to come. Managing these documents in a sustainable way is vital for UBC's future.

Table of Contents

Part I: The Industry, the Company, and the Service

A. The Industry

a. Scope

The scope of this industry analysis will be limited to information management services in the Greater Vancouver area. Information management services incorporate document storage, document destruction, and data media storage.

b. Industry Supply Chain

For document storage, boxes of documents are collected and delivered to the storage center in vans. At the storage facility, boxes are given a bar code and scanned to allow clients to track their boxes and to allow for easy storage and retrieval by facility staff. Boxes are then stored on shelves located in a humidity and temperature controlled area. Boxes are retrieved on client's request and can either be delivered or picked-up by the client. Documents can also be destroyed by the facility when they no longer need to be stored.

For data media storage, data tapes are stored in specialized tape libraries. Data tapes have bar codes that can be scanned and tracked using information management software.

c. Industry Overview

Due to the localized nature of the business, the industry analysis focuses on the greater Vancouver area. A Porter's Five Forces analysis (See Appendix A) reveals that there is low industry rivalry for document storage. Substitutes are high as many faculties, departments and schools (collectively called "units") store documents on campus (approximately 20,000 sq. ft.). The strength of buyers depends on the agreement between the UBC, the units, and the CSIM. If UBC regulations require units to use the CSIM for information management,

buyer power is low; on the other hand, if the CSIM must compete with other information management providers, buyer power is slightly higher, but high switching costs prevent high buyer power. The threat of new entrants also depends on UBC regulations. An agreement that dissuades competition creates high barriers to entry for information management at UBC.

d. Competitor Analysis

There are three firms in Greater Vancouver that specialize in information management: Iron Mountain, BC Records Management Services, and Butler Box & Storage Inc. Each firm provides similar services for document storage, retrieval, and destruction, as well as data storage. (See Appendix B)

Other firms, such as Ferguson Moving and Storage and Vault Valet Storage provide limited document storage services.

e. Macro-Environment

UBC is a political organization with its own rules and regulations for project development. According to their Campus and Community Planning website, UBC "aims to achieve a balance between ecology, economics, and community". UBC has a strong focus on sustainable initiatives that are in-line with the learning environment.

B. The Company and the Concept

The UBC Centre for Information Management will be the first facility of its kind in Canada. The facility will provide secure, long-term document and data tape storage services and record management consulting services for UBC units in Vancouver. The facility will also offer research opportunities for information management and sustainable storage technology,

with the ultimate goal to make UBC a world leader in sustainable information management and storage.

C. The Service

a. Documents Storage

During the initial phase of the project, the UBC CSIM will provide long term document storage. Storage will be offered for boxed documents of varying size. (See Appendix C) Boxes will be labeled and inventoried for easy tracking by facility staff and clients. Clients may also choose to store individual files on an "open shelf", which allows for fast retrieval of key documents.

File sorting and organizing services will also be provided for a fee. The CSIM staff will sort and organize files so that only documents that need to be stored are retained, which will save clients storage costs in the long term.

Box pick-up and delivery services will be available, and storage boxes will be available for purchase.

b. Document Digitization

Physical documents can be scanned and stored digitally using high volume, low energy scanners.

c. Document Destruction

When documents expire, the CSIM will destroy the documents using an industrial shredding machine. (See Appendix D) Destroyed documents will then be recycled by the CSIM staff.

d. Information Management Consulting (IMC)

The CSIM faculty will consult with administration staff from the various units at UBC about document storage regulations and procedures. The goal of IMC will be to reduce wasted storage space by helping institutions with storage and document management solutions that are cost efficient and sustainable.

e. Research

The CSIM will also provide faculty research opportunities in the field of Information Management. As the first facility of its kind in Canada, UBC can gain an advantage in sustainable document management and digital storage solutions.

D. Entry and Growth Strategy

The CSIM development team will first make an application to the UBC Board of Governors for capital financing. Following approval, the development team will follow UBC Treasury and UBC Campus and Community Planning procedures to finance and develop the project.

Growth will be in the area of sustainable information management consulting. As environmental sustainability becomes a bigger issue, UBC has an opportunity to be a world leader in sustainable document management and storage.

Part II – Market Research and Analysis

A. Customers

As indicated by the Product-Customer-Matrix (PCM) (See Appendix E), there are both on-campus and off-campus customers of information management. Off-campus businesses not part of UBC will not be a target of the CSIM in order to maintain exclusivity for UBC

clients. The target market for the CSIM will be on-campus units and off-campus UBC units such as UBC Robson Square.

Clients will be divided into high volume (1000 boxes and up) users, medium volume (500 to 1000 boxes) users, and low volume users (less than 500 boxes). Units requiring data tape storage will also be targeted. UBC IT Services is UBC's current supplier of server connected data storage.

B. Market Size and Trends

There are more than 400 hundred institutions on campus that may require information management services (Doyle, 2011). There will be various degrees of usage with an estimated 10 to 15 units requiring more than a thousand boxes of storage and 25 to 30 units requiring 500 to 1000 boxes of storage (Doyle A. , 2011).

The need for document storage is increasing approximately 20% per year as evidenced by the increase in storage fees to IM. (See Appendix F)

C. Competition and Competitive Advantages

The biggest competitor for the CSIM is Iron Mountain. UBC Supply Management recently reached an agreement with IM, which provides various storage solutions for a reduced price (UBC Supply Management, 2011). Currently, IM houses more than 25,000 boxes from UBC (Doyle, 2011).

Another small volume of boxes is housed at BC Records Management Services in Burnaby.

Although UBC has reached an agreement with IM that runs in 1 year terms, the CSIM will have a number of competitive advantages that will persuade customers to switch.

The biggest advantage the CSIM has is its integration into the UBC campus. As a member of UBC, the UBC board of governors can provide a mandate that all institutions on campus must use the CSIM rather than external companies. In addition, being on campus is much more convenient for clients to access their documents.

The next biggest advantage is the CSIM's commitment to sustainability. A 2009 UBC SEEDS report indicates that UBC's use of IM generates an equivalent of 105 tonnes of greenhouse gas emissions per year. (Jackson, et al. 2009) By simply storing documents on campus, these emissions can be greatly reduced.

Finally, by having documents stored in a Canadian owned facility, documents will be free from inspection by U.S. authorities. Since IM is U.S. owned, the US Department of Homeland Security has a right to inspect any document stored there. Homeland Security will have no such authority at the CSIM.

D. Estimated Market Share and Sales

As an institution in the UBC community, it is expected that use of the facility will be mandated by the university board of governors. Hence, the CSIM would achieve 100% market share after the first year of document transfer from IM and BCRMS.

Based on a volume of 25,000 boxes, the CSIM will make sales revenue of approximately $150,000 in year one, $300,000 in year two, and grow at approximately 20% per year in successive years.

E. Ongoing Market Evaluation

Demand for information management will be continuously monitored mainly via feedback from clients. The demand for document storage will be closely monitored using information management software.

Part III: Economics and Financial Plan

A. Assumptions

This project will be operated as a non-profit division under UBC; therefore, the facility will not need to pay corporate tax to the government. Part of the profits will contribute to academic research and further education. Based on market research, several assumptions were made:

- See Appendix G for fixed assets present value, useful age, and salvage value.
- The straight-line depreciation method will be used.
- In the first year, the CSIM will incur a $500,000 cost for moving 25,000 boxes from Iron Mountain to the UBC facility. $200,000 will be prepaid at the beginning for initial costs.
- The CSIM will set its accounts receivable policy for zero (0) days because all the customers are UBC units. The accounts payable policy will be the industry standard 30 days.
- The initial investment will cover fixed costs and first year working capital.
- The discount rate equals 5%, the cost of debt.

B. Project Economics

Due to the characteristics of the storage business, a viable business model should rely heavily on the limited space available for storage, meaning that this project will incur a large fixed asset investment, and the payback period will last much longer than an ordinary manufacturing or retail business. In UBC, the land and building usually have higher value than remote areas. To make the project feasible, the only method is to obtain grant funding from UBC or other donations. An NPV sensitivity analysis (See Appendix H) based on the donation rate shows that this project needs $8 million in grant fund for building construction in order to reduce otherwise huge interest expenses, which the CSIM could not afford with its own operating cash flow. The financial analysis will assume that this project will successfully obtain $8 million grand funding from UBC.

C. Break-Even Analysis

The revenue of this project will mainly come from physical document storage services. Based on market research, the average price of one cubic feet is $8.50. In year 1, the CSIM will focus on a document transfer plan, which is not a typical business model. In years 2 and 3, supporting employees will be reduced from four to two people, increasing the gross profit margin to 76%. However, with the increasing volume, the CSIM will have two more supporting employees from year 4, therefore reducing the gross profit margin to 66%. The fixed costs include SG&A, depreciation, IT infrastructure maintenance fee, and insurance cost. (See Appendix I for the break-even revenue level and break-even units in cubic feet.)

D. Capital Structure

Because this is a non-profit division and UBC fully owns the company, the initial investment, excluding building construction costs, will be financed by UBC treasury. The start-up cost

will amount to $601,150, including a $251,150 fixed asset investment and $350,000 in first year working capital. The large amount of first year working capital is due to the huge cost of moving over 25,000 cartons from IM to the CSIM facility. Because of the low cash inflow in the first 2 years, the CSIM will finance first year working capital by borrowing long-term debt. The interest rate quoted by UBC treasury is 5% for a 10-year term loan. The CSIM will use the simple interest method instead of effective interest method to simplify the calculation.

E. Financial Statement Projections

In the first year, the project would still burn cash because of the transition costs from IM and BCRMS that would be incurred. In the second year, the CSIM would generate negative net profit; however, the business would still be running because of the positive operating cash flow and reserve cash on account. In the year 3 to year 5, the project would generate enough operating cash flow that the CSIM could invest in academic research for UBC. (See Appendices J, K, and L for proforma balance sheet, income statement, and cash flow statements.)

F. Sensitivity & Scenario Analysis

In this project, the term loan interest rate and cost of fixed assets are vital factors affecting profitability. Because the CSIM have already assumed grant funding would cover the building construction cost, the CSIM will choose the second most expensive fixed asset—racking cost as another variable input. Moreover, the CSIM will use the present value of 5 years forecasted cash flows instead of NPV to measure the influence of variables due to the nature of the storage business. From the sensitivity analysis against changes of interest rate (See Appendix M), it was found that the 5% interest rate quoted by UBC treasury is too high for this project. Because the CSIM is a non-profit research center, a lower interest rate like

3% would favour this project, reducing the payback period. Another sensitivity test on racking costs (See Appendix N) also shows the same results. However, compared to the first sensitivity test, it was found that the interest rate is the most significant factor for this project.

In addition to a sensitivity analysis, a scenario analysis (See Appendix O) based on revenue growth, interest rate, labour cost and racking cost was developed to help with decision-making. However, the negative present value of cash flow under the worst case scenario shows that the high interest rate with low revenue growth rate would increase the risk of discontinuing this project.

Part IV: Marketing and Communications Plan

A. Overall Marketing Strategy

The CSIM's positioning will be based on ecological, economic, and social sustainability aimed at reducing UBC's ecological footprint. The CSIM's existing customers are any UBC Vancouver units that already store documents with Iron Mountain (IM). Initial selling of the CSIM's services will be to heavier volume units, such as HR and Finance, who store the most documents with IM. Future selling will be to moderate to low volume units and units that do not have current storage with IM.

Potential customers within each unit will be identified by their responsibility for documents storage within each unit; they will be contacted via email, phone or in-person to arrange sales appointments. Features of the facility that will be emphasized to generate sales include:

- Sustainable storage conditions, such as reduced CO_2 emissions through minimized transport, green building materials.

- Consultation services that offer recommendations on how to minimize storage volume, better organize documents, and appropriate destruction scheduling.
- Ease of access as the facility is within the UBC campus.
- Knowledge of university documents policies and procedures.

Intimate knowledge of UBC documents policies and procedures will enhance customer acceptance of the facility's offerings as the CSIM will best understand customer needs, requirements, and limitations. The CSIM's services will be initially introduced to the UBC Vancouver campus as the primary intent of the facility is to serve this campus' information management needs; the facility's services will extend to other UBC campus', such as the Robson campus, or other educational partners near UBC Vancouver.

B. Pricing

The facility's pricing strategy will be to match IM's list price on each individual service (See Appendix P for a detailed Service Fee List); although, use of this facility will be mandatory and therefore the CSIM would not be competing with IM. Further, until all documents are removed from IM, the CSIM will match IM's current discounted rate for UBC which is 45% (Iron Mountain Canada Corporation, 2011) to ensure all units are charged equally during that time. Once transfer of documents is complete, the CSIM will switch to the full list pricing.

Competition is a non-factor as use of this facility will be mandatory and no documents storage with IM or any other third party will be allowed. Although use of this facility will be mandatory, the pricing must still be reasonable or the CSIM may not persuade the units that currently use their own existing space to instead store documents at the CSIM.

When each unit's documents are transferred to the CSIM, a one-time discounted price will be offered on document sorting and destruction scheduling services if the unit opts-in at that time, prior to the documents being entered into the CSIM database. Unit's will be motivated by the discount, and by the cost minimization that will result from the immediate elimination of unneeded documents which will decrease storage costs and the avoidance of paying fees in the long term to permanently remove documents from the database.

C. Limitation of Liability

The CSIM facility will be constructed to protect contents from fire, flood, and earthquakes. However, the CSIM's liability, if any, for loss, destruction, or damage to materials stored with the CSIM is limited to a) $1.00 per box, linear foot of open shelf files, container, or other hard-copy storage item b) the cost of replacing the physical media for reel tape, audio tape, film, data cartridges, or data cassettes, or other non-paper storage items. Unless otherwise declared and charged, the customer acknowledges that it has declined to declare an excess valuation. This policy matches IM's limitation of liability policy. (Iron Mountain Canada Corporation, 2005)

D. Integrated Marketing Communications

a. Personal selling

The two faculty staff will combine to act as an initial and long-term sales force for the CSIM. They will use personal selling techniques, such as sales appointments, meetings and presentations, to "sell" CSIM's services to various units on the UBC campus. Personal selling is a very appropriate method as the services of the facility are only available to faculty and staff of UBC, and not students, and it also helps build long-term relationships.

b. Direct Marketing

Direct marketing will be used to reach the target audience and encourage a direct response. Emails, direct mail, and insert media will generate initial awareness of the CSIM and ensure various units around UBC are kept apprised of the facility's services over the longer term.

Part V: Design and Development Plans

A. Development Status and Tasks

a. Capital Project Approval Process

The first step in the development of the CSIM facility is to make an application to the UBC board of governors. Project plans will need to be approved through a four step process. After approval from the board of governors, an application will be made to UBC Treasury for capital funding (Capital Financing, 2011).

After approval, a permit application will be made to UBC Campus Planning. Campus Planning will assist with building design, and they will make sure building plans are in line with UBC's land use plan and campus plan. Before construction can begin, the project will go through a public consultation process, which may cause changes in the design (Process, 2011). This entire process could take several months; hence, construction of the building would not start until 2013.

The CSIM development team will gain assistance from Campus Planning for construction contracting and any permit applications that need to be made.

b. Building Design

The CSIM building will be a 25,000 square foot single story warehouse-type facility. In keep with UBC's sustainability standards, the building will be designed to be at least Gold LEED certified (Council, 2009). The exterior walls will be "tilt-up", which is best for fire prevention and burglary prevention (Tompkins, 1998).

The interior of the building will optimize the use of space by carefully planning beam placement, using mobile shelving units, and building a mezzanine above offices (Shaw, 2011).

c. Building Design – Special Considerations

Because the CSIM building is used for secure document storage, some special design specifications must be met:

i. The building must have an advanced mechanical system that keeps temperature and humidity at constant levels.
ii. The building must have a dry sprinkler system to prevent documents from getting damaged in case of a fire elsewhere in the building.
iii. The facility needs to have a back-up power generator to ensure the mechanical system continues to run.

B. Difficulties and Risks

a. Project Approval

The biggest risk is the project not being approved by the UBC board of governors, UBC treasury, and UBC Campus Planning. If the project is disapproved, the project will be

delayed until reapplication can be made. Reapplication will be made based on recommendations made by the board of governors and Campus Planning.

b. Public Consultation

The public consultation process may also cause delays. During the five stage consultation process (UBC, 2011), delay could happen at any one of the stages. The CSIM development team will work closely with the Campus Planning department to resolve any issues that arise in the public consultation process.

c. Construction Delays

Construction delays could occur due to severe weather or labour disputes. The CSIM development team will negotiate with contractors to have contingency plans in case of delay.

C. Product Improvement and New Products

a. Consulting Service

The CSIM faculty will develop information workshops to clients on how to manage information more effectively and sustainably.

b. Electronic Information Management System

The CSIM faculty will work in conjunction with the UBC IT department to develop proprietary software for information management. Development of the software will commence as soon as the project is approved.

D. Costs

a. Construction

The construction costs of the CSIM facility is approximately $300 per square foot (Svanhill, 2011). Construction costs include labour, materials, and special mechanical equipment

needed for the facility. The total cost of design and construction of the 25,000 square foot facility is approximately $8 million.

Part VI: Operations Plan

A. Operating Cycle

a. Operations

The operations of CSIM involve the following services:

a. Depositing items
b. Accessing deposited items
c. Retrieving items (box-removal)
d. Ordering new boxes
e. Ordering new rolls of barcode stickers
f. Notice of expiration and destroying items

For operations a, b, c, d and e, a typical operating cycle would include the following steps:

i. Upon the opening of an account, a roll of barcode stickers will be provided to the client free of charge. All items must have a barcode sticker attached before they are accepted for process.
ii. The client submits the appropriate online order form to the CSIM.
iii. Clients can then choose to have the boxes picked-up (add one hour to cycle time), or clients may deliver the boxes to save handling cost.
iv. The barcode is scanned at the completion of each step to ensure traceability.
v. The flow time of the above processes is expected to be less than two hours (add two hours for shipping by the CSIM).

For operation f, the operating cycle will be as follows:

i. Each box is assigned an expiry date upon deposit according to the category of the contents. Automatic email notifications will be sent to the client at the one month, two weeks and one week marks.
ii. The client submits the online order form to the CSIM for authorization of destruction.
iii. Upon authorization, the contents will be shredded in an environmentally friendly and secure fashion. An email notification will be sent to the customer after destruction.
iv. Arrangements will be made with UBC Plant Operations to recycle all paper waste, similar to other buildings on campus.
v. The flow time of this process should be less than two hours.
vi. The number of expired items should be listed in the monthly invoice, and storage cost should continue to be charged until authorization of destruction is received from customer.

b. Seasonality in Sales Volume

Due to cyclical nature of events at UBC, such as exams and end of fiscal year, a high degree of seasonality is expected in sales volume for the CSIM (see Appendix Q for graphical illustration):

i. For depositing, there should be three main peaks in a typical year, coinciding to one month after each exam period (January, May, August), and a minor peak after the end of the fiscal year (April).
ii. For retrieval, it is expected to reach its peak just before the end of the fiscal year (March).

iii. For destruction, it is expected that most items expire after each peak of depositing, but the authorization of destruction may take more than one month to obtain.

B. Location

a. New Building

Possible locations for the CSIM facility (See Appendix R for photos):

i. University Boulevard and Lower Mall, next to West Parkade
ii. Agronomy Road and Main Mall, next to Landscape Architecture Annex
iii. Thunderbird Boulevard and East Mall, part of C2 Lot and the lawn next to it
iv. Agronomy Road and Health Sciences Mall, lawn and parking lot next to power station

As these locations involve removal of parking spaces, underground parking will be one way to recover these spaces, and possibly increase the number of spaces.

b. Existing Space

There are several locations that may have 25,000 sq. ft of existing space for the CSIM:

i. Main Library
ii. Basement of Old Auditorium
iii. Allocate space in any building currently in construction

However, it is difficult to determine if existing space meets the special requirements for the CSIM facility; therefore, a new building is likely the best option.

C. Facilities and Improvement

a. Required to Start

A 25,000 square foot building with one to two thousand square feet of office space and meeting room space will be needed. (See Appendix S for a list of required supplies and equipment)

a. Required in Three Years:

Special data tape storage units will be purchased to handle data tape transfer from off-site storage locations. More computer power may be needed for better tracking and larger volume.

D. Operational Strategy and Plans

a. Transferring Existing Documents From Iron Mountain to the CSIM

In Year 1 of the CSIM, the existing deposits at IM will be retrieved and transported to the CSIM. At approximately $18 per box for 25,000 boxes, the retrieval cost amount to $460,000, which does not include variable delivery costs(this also shows the need to have the CSIM sort the contents and remove the expired documents before the cost gets higher year after year). The total cost of delivery from IM to the CSIM is expected to amount to $500,000.

The process will be done in phases, customer-by-customer, starting with units with heaviest volume (HR and Finance), based on IM storage volume. The entire process is expected to be completed within Year 1. (See Appendix T for calculations)

b. Supplies

The only recurring supply is storage boxes. In order to optimize storage space, the CSIM will offer only three sizes (See Appendix C). These boxes will be sourced from Fellowes or

a similar manufacturer of post-consumer recycled boxes. The regular-sized boxes are expected to cost about $2 each (Buyonlinenow.com, 2011). The CSIM will require its customers use them, and sell to them at a 30% margin.

Three months' supply of each type of box, about 3000 boxes in total, will be kept in inventory. Orders to suppliers will be made in March, June, September and December, in order to prepare for peak periods.

c. Security

A 24-hour surveillance system will be installed at the CSIM facility to ensure safety and security. UBC patrols will make the CSIM part of their patrol route, just like every other building on campus.

Regular visual inspection of the condition of boxes, not the contents, will be provided by the CSIM staff. If any is found damaged, a re-boxing fee will be charged to the customer if the CSIM deems it the responsibility of the customer or free replacement will be provided otherwise. An email notice will be sent to the owner of the box for instructions in both cases.

E. Regulatory and Legal Issues

As the CSIM requires support from UBC at the start-up, it is vital that UBC grants the CSIM exclusive service to all units. This kind of exclusivity clause is similar to that of the Plant Operations.

The privacy issue should be similar or less than that of the current service in use, IM, which is a third-party company. All the CSIM staff will be required to sign non-disclosure agreements.

All labour contracts at the CSIM should abide to the collective bargaining agreement between UBC and CUPE 116.

Part VII: Management and Personnel

A. Organization

The key management role of the CSIM will be held by Alan Doyle, University Records Manager of University Archives. One additional faculty person will be required, as well as four support staff. (See Appendix U for the Organizational Chart)

B. Management and Personnel

a. Management

The University Records Manager, Alan Doyle, will be responsible for all key management responsibilities of the CSIM and will also make up part of the sales team. Mr. Doyle will effectively act as an ambassador for the CSIM, championing its services and sustainable contribution to UBC through effective, in-person communications.

b. Faculty

The faculty member will have an Information Management background and education, and relevant Records Management expertise. This individual will be responsible for providing consulting services to customers and also make up the other part of the sales team. This individual will be a salaried faculty member, ranging from $65,000-$90,000 a year, dependent upon experience and expertise. They will also be responsible for daily supervision of support staff.

c. Support Staff

Three of the support staff will have clerical experience and ideally some records management experience. They will be responsible for providing support in the areas of document organization (receiving, sorting, recording, and destruction of documents) and various office activities. These individuals will be paid an hourly wage, starting at $18 an hour.

One of the support staff will have experience with warehouse equipment and be in good physical shape. They will be responsible for the physical movement of boxes and disposal of destroyed documents within the facility. This individual will be paid an hourly wage, starting at $18 an hour.

Additionally, the CSIM may wish to have a UBC student intern at the facility or work part-time to help relieve workload during busier times.

The suggested wages/salaries are in line with current UBC standards. Further, both the clerical and physical labour support staff will belong to CUPE local 116.

C. Supporting Services

Supporting services will be required from UBC's IT unit to assist with the CSIM's documents management system.

Part VIII: Overall Schedule

a. Schedule

The overall schedule (See Appendix V) for the CSIM will commence in early 2012 by making an application to the UBC Board of Governors. The entire approval process is expected to last 6 to 8 months. After project approval from the board of governors, UBC

Treasury, and UBC Campus Planning, construction will begin by early 2013. Construction will take 8 to 12 months to complete.

After the project is approved and construction timelines are finalized, UBC Supply Management will contact IM and BCRMS to inform them that the timeline for the withdrawal of UBC documents and digital tapes from their facilities.

During the construction phase, the CSIM faculty will consult with units on campus regarding UBC's plans for information management and storage. Support staff will also be hired before the new CSIM facility is complete.

As mentioned, after the CSIM facility is completed, documents from IM and BCRMS will be transferred to the CSIM. This entire process will take about one year.

b. Possible Delays in the Schedule:

i. The UBC Board of Governor and public consultation processes could delay the process for a variety of reasons including financing and facility design
ii. Bad weather or labor strikes can affect the construction progress

c. Possible Impact and Solutions:

There is little the CSIM development team can do in terms of legislation and weather, but it can attempt to do multiple tasks simultaneously if possible.

i. Approval process slippage – It is estimated that the possible approval result. If it is likely approved, the CSIM can start contacting UBC Campus Planning to consult with them on a permit application.

ii. Construction schedule slippage – The CSIM development team will work with UBC Campus planning during the construction bidding process and construction contracting to build contingencies for any delay in construction.

Part IX: Risks, Problems, and Assumptions

A. Risks

The following risks are the most critical to the CSIM:

i. UBC Board of Governors rejects Business Plan proposal

- Rejection of the proposal would seemingly mean that the proposal is either a) not sound in its current form, or b) not sound, even if modified.
- Responses include revision of the proposal pursuant to the feedback received, or termination of the proposal process.
- To mitigate this risk, the proposal should be reviewed thoroughly and updated to include new information prior to submission

ii. Sales projections not achieved

- Overestimation of sales would cause the CSIM to review existing operations and reassess sales projections
- Responses include seeking new sources of revenue, such as renting space for other purposes, and additional funding from UBC
- To mitigate this risk, the CSIM should ensure projections are kept conservative

iii. Construction costs are in excess of estimates

- Underestimation of construction costs would cause the CSIM to seek additional funding from UBC, and potentially seek new sources of revenue

- To mitigate this risk, the CSIM should work closely with the architects, UBC Planning Department, and construction managers to ensure cost estimates are as accurate as possible

iv. Construction schedule exceeds estimate

- Underestimation of construction time would cause the CSIM to revise the overall operations schedule and communicate this revision to affected customer units
- To mitigate this risk, the CSIM should work closely with the construction managers to ensure progress is continuous and uninterrupted where possible

B. Problems

The biggest perceived fatal flaw of this venture is that it is not a profitable venture if the CSIM does not receive grant funding and must pay interest on a loan. If interest payments on the building costs are factored into the financial statements, the venture will not be profitable. If grant funding is obtained and interest payments are greatly reduced, then the CSIM is a profitable facility. However, the purpose of the CSIM is for it to contribute to the overall sustainability of UBC Vancouver and its reputation. This being said, it can be expected that UBC will contribute external funding from other areas of UBC to the CSIM to help offset its construction costs.

C. Assumptions

The Business Plan makes the following key assumptions:

i. UBC's agreement with IM has surpassed the original 3 year commitment, and is now operating in successive 1 year term commitments which renew automatically until written notice is given.

ii. The UBC Board of Governors will mandate the compulsory use of the CSIM facility and disallow use of third party storage firms, such as IM, for any and all UBC-related records, documents, or media storage.

iii. Alan Doyle's position at UBC will move from University Archives to the CSIM.

iv. Cost calculations are based on a facility of 25,000 square feet.

v. The CSIM staff will operate Monday to Friday, 8 hours a day, with vacation pursuant to union requirements; also, calculations are based on full staffing every work day.

vi. Withdrawal of documents from IM will not affect current discounting levels or result in penalties in the form of additional fees; this is due to the difficulty of calculating said fees or discount reduction that may occur once removal of any documents occurs. Further, any penalties would be very minor.

vii. Heavier volume users (UBC units) of IM are also considered to have a heavy volume of storage located on the UBC campus, and so on.

viii. Paper documents will always exist to some degree, despite the current digital storage age, as complete eradication of paper seems unreasonable. Further, existing paper documents will remain useful/viable into the foreseeable future and therefore will need to be stored.

Word Count: 5,968

Part X: References

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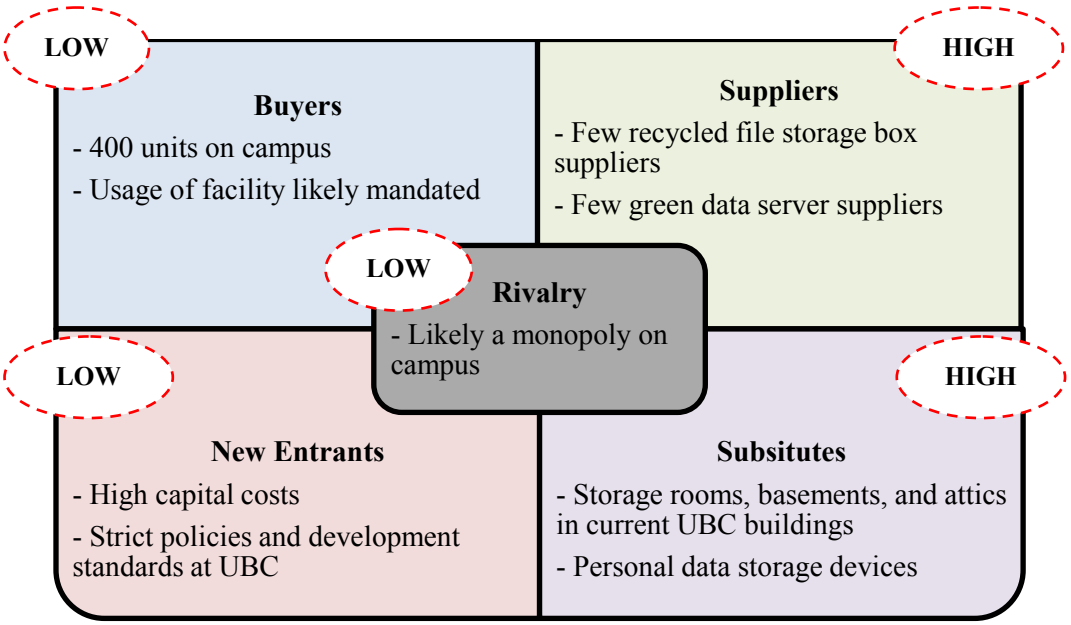
Part XI: Appendices

Appendix A – Industry Analysis



Appendix B –Competitor Analysis

Company	Location	Services
Iron Mountain[1]	Coquitlam	Document management, health information management, digital archiving, records management & storage, secure shredding, kata protection and recovery, disaster recovery
BC Records Management Services[2]	South Burnaby	Document storage, scanning & imaging, media storage, shredding & destruction
Butler Box & Storage[3]	Vancouver	Document and data storage, document tracking, digital media storage, destruction of records, boxes for sale
Ferguson Moving & Storage[4]	Vancouver	Record document storage and tracking, secure shredding
The Vault Valet Storage[5]	Vancouver	Document and record storage

1. (Iron Mountain Canada Corporation, 2011)

2. (BC Records Managment Services, 2011)

3. (Butler Box & Storage, 2011)

4. (The Vault Valet Storage, 2011)

5. (Ferguson Moving and Storage, 2011)

Appendix C – Box Sizes

Letter/Legal	24” Letter	24” Legal
		
Size: 10” x 12” x 15”	Size: 10” x 12” x 24”	Size: 10” x 15” x 24”
*All boxes made from 100% post-consumer waste materials		

Source: Fellowes.com

Appendix D – Paper Shredder

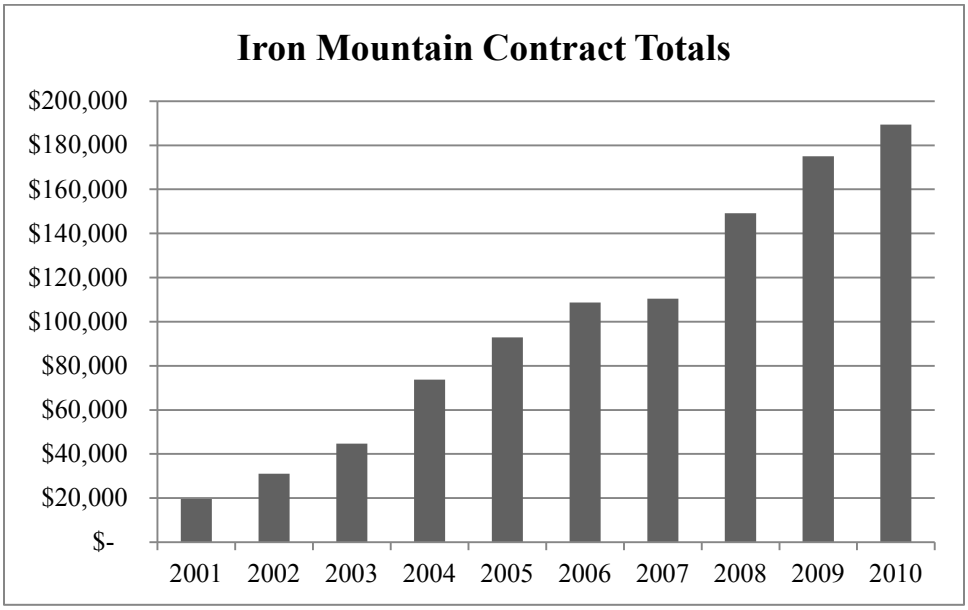
Source: http://www.factory-express.com/papershredders/Kobra_Cyclone_HS6_High_Security_Paper_Shredder-8249.htm

Appendix E –Product Customer Matrix of Information Management Industry

	On-Campus Users			Off-Campus Users	
Products	**Large Volume**	**Medium Volume**	**Small Volume**	**UBC Units**	**Non-UBC Companies**
Document Storage	**X**	**X**	**X**	**X**	
Data Tape Storage	**X**	**X**	**X**	**X**	
Server Connected Digital Storage					
Document Digitization	**X**	**X**	**X**	**X**	
Document Destruction	**X**	**X**	**X**	**X**	
Consulting	**X**	**X**	**X**	**X**	

***X = The CSIM’s Target Customers**

Appendix F –Service Fees Paid to Iron Mountain

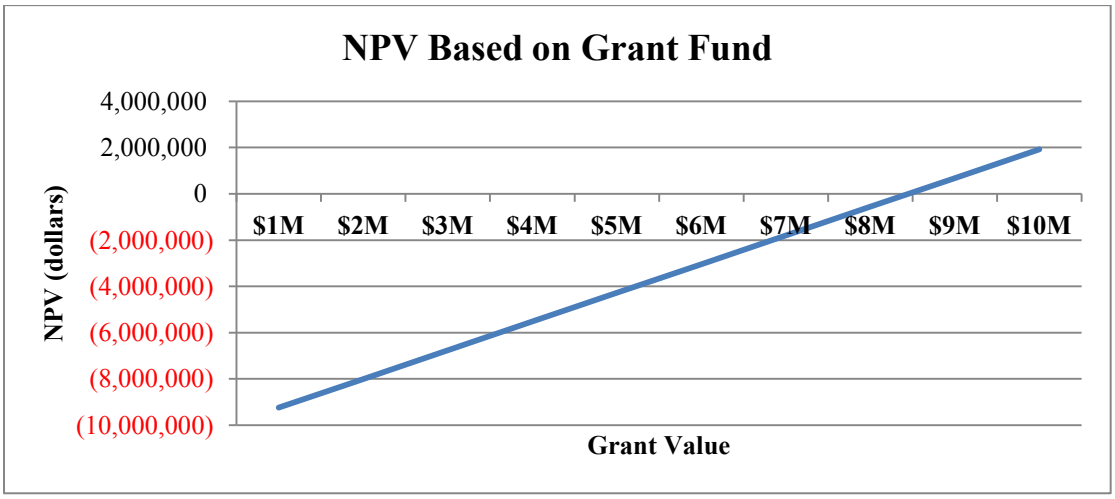


Source: (Doyle, 2011),(Wilson, 2011)

Appendix G – Fixed Asset Information

Fixed Asset	Present Value	Useful Age	Salvage Value
Building construction	$8,000,000	80	$4,000,000
Racking	$200,000	40	-
Warehouse equipment	$37,650	20	$5,000
Computer hardware & software	$5,400	5	-
Office supplies	$8,100	10	-

Appendix H – NPV based on Funding Grants



Appendix I – Break-Even Analysis

	Year 2	Year 3	Year 4	Year 5
CM Ratio	0.76	0.79	0.66	0.71
Break-even revenue	266,529	258,098	316,741	297,959
Break-even units (CF)	31,356	30,365	37,264	35,054

Appendix J – Proforma Balance Sheet

	Beginning	Year 1	Year 2	Year 3	Year 4	Year 5
Current Assets ($)						
Cash	150,000	38,307	44,222	86,368	113,141	200,769
Accounts receivable	0	0	0	0	0	0
Prepaid expenses	200,000	0	0	0	0	0
Total Current Assets	**350,000**	**38,307**	**44,222**	**86,368**	**113,141**	**200,769**
PP&E						
Building	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000	8,000,000
Racking	200,000	200,000	200,000	200,000	200,000	200,000
Warehouse equipment	37,650	37,650	37,650	37,650	37,650	37,650
Computer hardware and software	8,100	8,100	8,100	8,100	8,100	8,100
Office supplies	5,400	5,400	5,400	5,400	5,400	5,400
Accumulated depreciation	0	58,793	117,585	176,378	235,170	293,963
Net PP&E	8,251,150	8,192,358	8,133,565	8,074,773	8,015,980	7,957,188
Intangible Assets (R&D)	0	0	0	20,000	50,000	150,000
Total Assets	**8,601,150**	**8,230,664**	**8,177,787**	**8,181,140**	**8,179,121**	**8,307,956**
Current Liabilities ($)						
Accounts payable	0	333	167	200	240	288
Short-term notes payable	0	0	0	0	0	0
Accrued liabilities	0	150,000	100,000	50,000	0	0
Total CL	0	150,333	100,167	50,200	240	288
LT Debt Payable	601,150	601,150	601,150	601,150	601,150	601,150
Earned Surplus		(520,819)	(2,711)	53,320	47,941	128,787
Total Equity	8,000,000	7,479,181	7,476,470	7,529,790	7,577,731	7,706,518
Total Liabilities and Equity	**8,601,150**	**8,230,664**	**8,177,787**	**8,181,140**	**8,179,121**	**8,307,956**

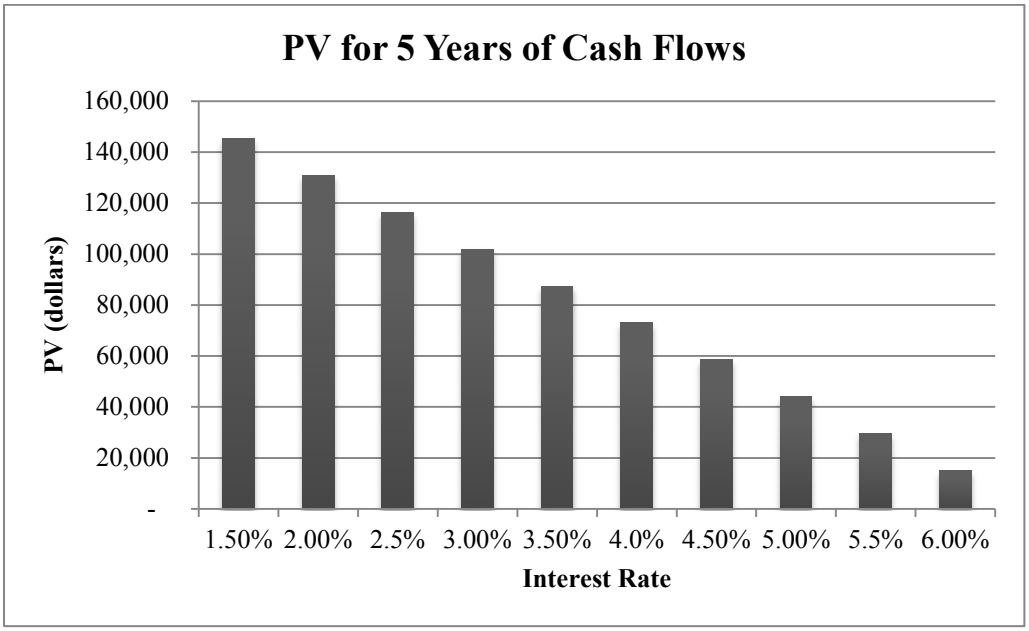
Appendix K – Proforma Income Statement

	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue ($)					
Total revenue	151,271	302,542	363,050	435,660	522,792
Cost of Sales ($)					
Labor	138,240	70,502	71,912	146,701	149,635
Product cost	4,000	2,000	2,400	2,880	3,456
Transportation& first year moving	300,000	300	315	331	347
Total CGS	442,240	72,802	74,627	149,912	153,439
Gross Profit	(290,969)	229,739	288,422	285,748	369,353
Other Expenses ($)					
Selling, general & administration	130,000	132,600	135,252	137,957	140,716
Depreciation and amortization	58,793	58,793	58,793	58,793	58,793
Information technology	1,000	1,000	1,000	1,000	1,000
Insurance	10,000	10,000	10,000	10,000	10,000
Operating Profit	(490,762)	27,347	83,378	77,998	158,844
Interest expense	30,058	30,058	30,058	30,058	30,058
Income ($)					
Net Income	**(520,819)**	**(2,711)**	**53,320**	**47,941**	**128,787**
Retained	(520,819)	(2,711)	53,320	47,941	128,787

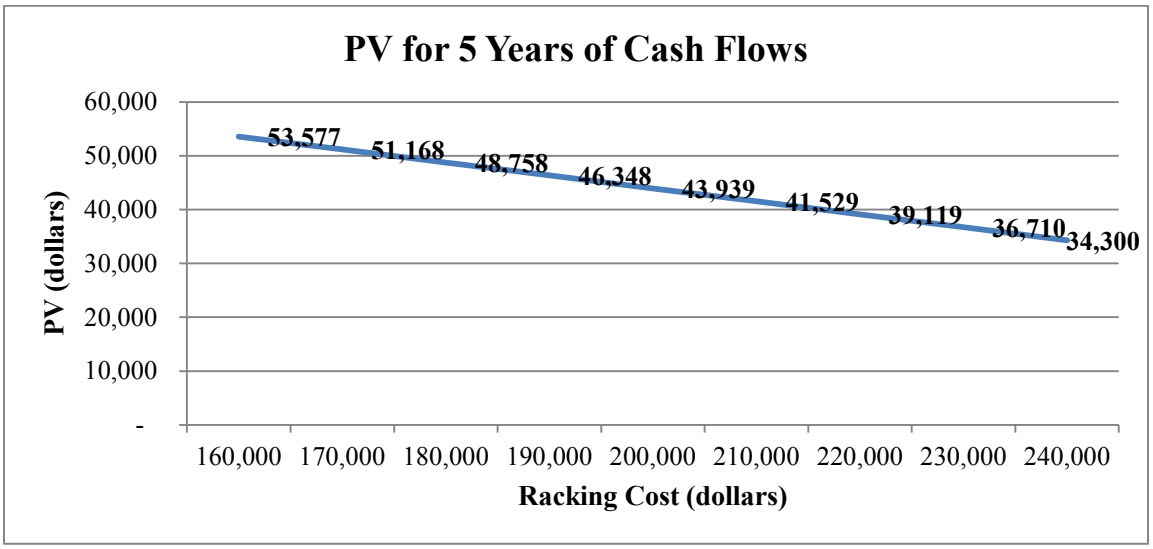
Appendix L – Proforma Cash Flow Statement

	Year 1	Year 2	Year 3	Year 4	Year 5
Net Income	(520,819)	(2,711)	53,320	47,941	128,787
plus Depreciation	58,793	58,793	58,793	58,793	58,793
Changes in Working Capital					
Accounts Receivable	0	0	0	0	0
prepaid expenses	(200,000)	0	0	0	0
Accounts Payable	333	(167)	33	40	48
Accrued liabilities	150,000	(50,000)	(50,000)	(50,000)	0
= Cash From Operating Activities	(111,693)	5,915	62,146	56,773	187,627
Capital Expenditures					
Other investment			(20,000)	(30,000)	(100,000)
= Cash From Investing Activities	0	0	(20,000)	(30,000)	(100,000)
Short-term notes payable	0	0	0	0	0
Issue long-term bond	0	0	0	0	0
= Cash From Financing Activities	0	0	0	0	0
Total Cash Inflow	**(111,693)**	**5,915**	**42,146**	**26,773**	**87,627**

Appendix M – Sensitivity Against Changes in Interest Rates



Appendix N – Sensitivity Against Changes in Racking Costs



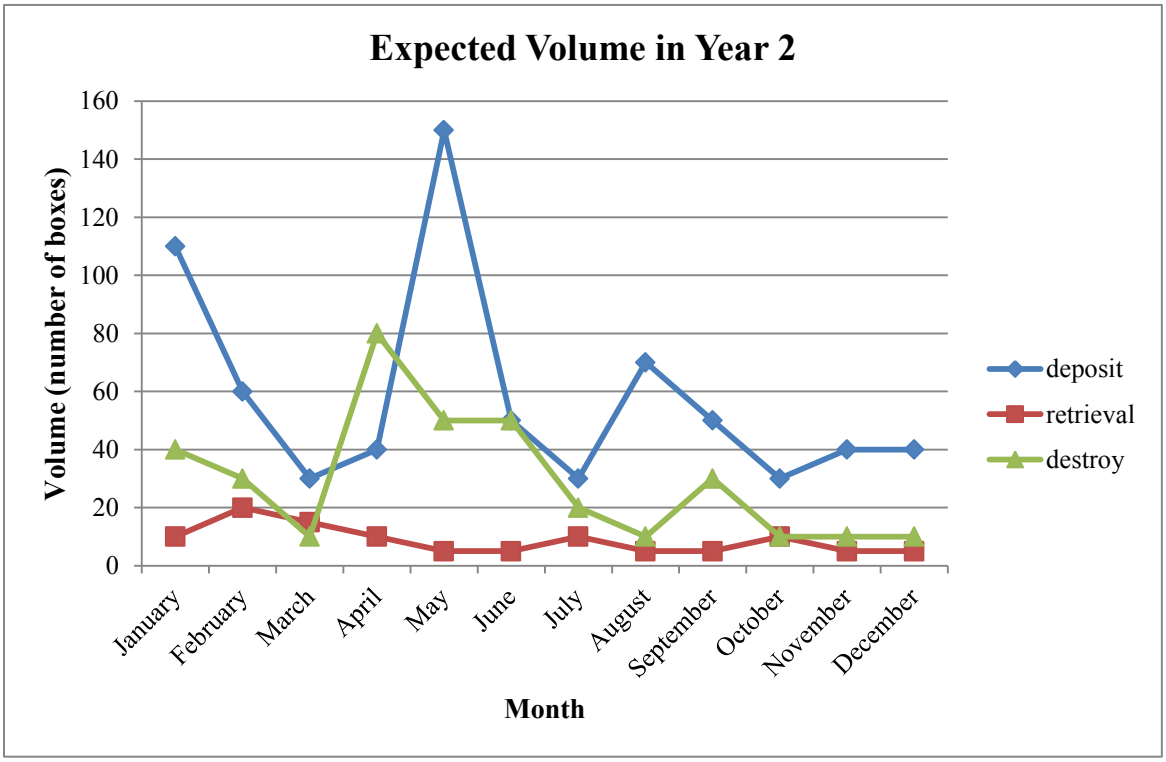
Appendix O – Scenario Analysis

	Current Values	Worst Case	Best Case
Changing Cells			
Revenue growth rate	1.20	1.10	1.30
Interest rate	5.00%	5.00%	2.00%
Labor cost/hour	$18	$22	$12
Racking cost	200,000	240,000	160,000
Result cells			
PV of 5 years cash flow	$43,939	$(230,754)	$461,425

Appendix P – CSIM Service Fee List

Description	List Price	Per
Standard Storage and Related Services		
Storage – box	$0.465	Cubic foot
Receiving and entering - box	$3.98	Cubic foot
Regular retrieval – box	$4.05	Cubic foot
Regular retrieval – file from box	$7.05	File
Archival destruction – box	$6.02	CF, plus Regular retrieval charge
Permanent withdrawal – box	$6.02	CF, plus Regular retrieval charge
Permanent withdrawal – file from box	$2.76	File, plus Regular retrieval charge
Open shelf storage - file	$0.91	Linear foot
Receiving and entering – open shelf file	$5.63	Linear foot
Regular retrieval – open shelf file	$2.98	File
Regular re-file – open shelf file	$2.98	File
Archival destruction – open shelf file	$2.76	File, plus Regular retrieval charge
Permanent withdrawal – open shelf file	$2.76	File, plus Regular retrieval charge
Next day delivery	$5.00	Visit, plus handling charge
Regular pickup	$5.00	Visit, plus handling charge
Handling charge	$3.33	Cubic foot
Premium Storage and Related Services		
Rush retrieval – box	$6.05	Cubic foot
Rush retrieval – file from box	$10.48	File
Regular interfile – box	$6.92	File
Archival destruction – file from box	$5.15	File
Rush retrieval – open shelf file	$5.95	File
Regular interfile – open shelf	$4.60	File
Rush delivery – same day	$15.00	Visit, plus handling charge
Rush pickup – same day	$15.00	Visit, plus handling charge
Re-boxing charge	$5.20	Labour, plus new box cost
Consulting Services		
General consulting	$100	Hour
Special projects consulting	$150	Hour

Appendix Q – Volume Seasonality



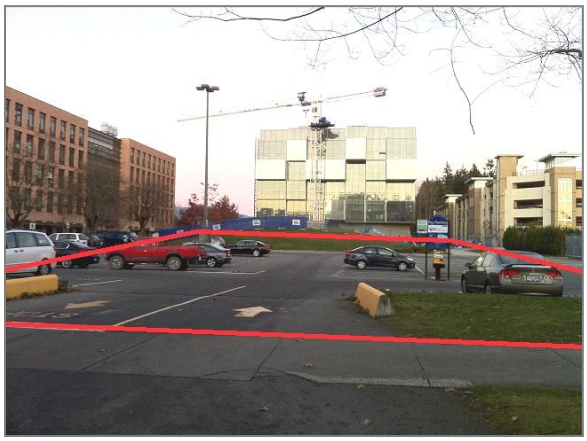
Appendix R – Proposed Locations for New CSIM Facility

a. Proposed location #1: University Blvd. and Lower Mall (near West Parkade)

b. Proposed location of CSIM #2: Agronomy Road and Main Mall

c. Proposed location of CSIM #3: Thunderbird Blvd. and Health Sciences Mall

d. Proposed location of CSIM #4: Agronomy Road and Health Sciences Mall



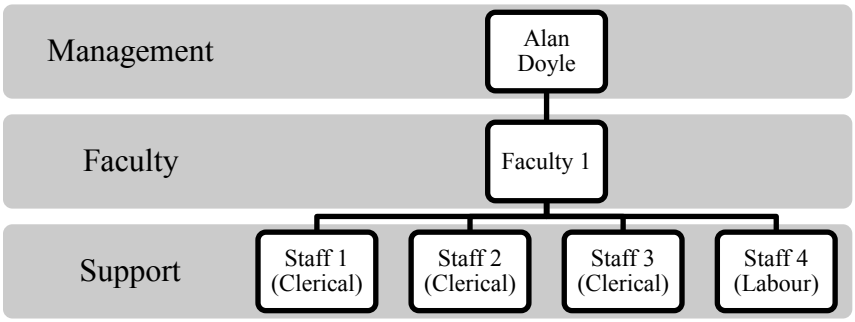
Appendix S – List of Required Supplies and Equipment

Item	Unit Price	Quantity	Total
Computer Related			
Computer terminals	$700	6	$4,200
Computer server	$600	3	$1,800
Computer accessories	$100	6	$600
Barcode label system	$500	1	$500
Warehouse management system	$500	1	$500
Check-in/check-out system	$500	1	$500
Furniture			
Front desk	$800	1	$800
Chairs	$100	10	$1,000
Desks	$200	5	$1,000
Tables	$500	1	$500
Bookshelves	$200	4	$800
File Cabinets	$300	10	$3,000
Operations Equipment and Fixtures			
Paper shredder	$33,900	1	$33,900
Surveillance system (16-camera)	$1000	1	$1,000
Shelves (24”x48” = 8 sq.ft.)	$200	1000	$200,000
Pallet jack	$150	2	$300
Hydraulic table cart	$150	3	$450
Hydraulic lift	$2,000	1	$2,000
Supplies			
Boxes			
Letter/legal sized	$3	550	$1,650
Undersized (checks, payment slips)	$1	200	$200
Oversized (blueprints, plans, drawings)	$1	150	$150
Stationery (various)			$300

Appendix T – Transfer Calculations

Time to Transfer Documents from Iron Mountain and Enter Into CSIM Database				
3	staff			
4	boxes/hour			
8	hours/day			
5	days/week			
4	weeks/month			
12	months/year			
Process Time				
Period:	**Day**	**Week**	**Month**	**Year**
Boxes:	96	480	1,920	23,040

Appendix U – Organizational Chart



Appendix V – Overall Schedule

WBS	Tasks	Start	End	Duration (Months)	% Complete
1	**Phase 1**	**1/01/12**	**10/01/13**	**19-23**	**0%**
1.1	Approval Process	1/01/12	9/01/12	6-8	0%
1.2	Building Construction	7/01/12	11/01/13	12-14	0%
1.2.1	Blueprint Design	7/01/12	11/01/12	2	0%
1.2.2	Constructions	11/01/12	8/01/13	9	0%
1.2.3	Interior Design	8/01/13	9/01/13	1	0%
1.3	Final Evaluation	9/01/13	10/01/13	1	0%
2	**Phase 2**	**10/01/13**	**2/01/15**	**13-16**	**0%**
2.1	Recruitment	10/01/13	12/01/13	1-2	0%
2.2	Equipment purchasing	10/01/13	11/01/13	1	0%
2.3	Marketing	10/01/13	2/01/15	13-16	0%
2.4	Consulting Workshop	10/01/13	12/01/13	1-2	0%
2.5	Transition	11/01/13	1/01/15	12-14	0%