

A SHARED BRANCHING SOLUTION FOR FIRST WEST CREDIT UNION

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Abstract

One strategic decision for First West Credit Union executives is to implement a Shared Branching service so that a member of one subsidiary can acquire banking services in a branch of a different subsidiary. First West owns two distinct subsidiaries – Envision Financial and Valley First. Each runs different banking systems. The integration of these systems is a business challenge. Our research evaluates four business solutions using existing tools and frameworks, such as gap analysis and cost/benefit analysis, reflecting the business priorities. In the short term, we recommend implementing the service provided by CUETS Financial, a service partner of the Canadian credit union system, to address the intermediate need. For a longer term, we believe First West should explore a potential solution from Central 1, a service provider for Canadian credit unions, or the option of developing an interface in-house due to the functionality and scalability advantages. We do not recommend banking conversion because it is cost prohibitive, unless First West decides to pursue a different long-term strategic goal.

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Glossary

Business Intelligence	A computer system that subtracts business data, analyzes business performance, and facilitates business decision making. It commonly consists of a backend of data mart or data warehouse and a frontend reporting platform or data analysis tool
CHIP Cards	A credit or debit card that has the same properties as the Magnetic Stripe Card, with the addition of a microchip embedded in the card for additional security, mostly to prevent duplication of the card.
Data Conformation	A technique used in data warehouse design to unify data acquired from different data sources so the business user is able to drill across the different data and compare the business values with same set of business attributes and measures (conformed dimensions)
Data Mart	It is usually a data store that is designed to store data in an optimized way to answer questions for specific business function. There is no definitive boundary to distinguish between a data mart and data warehouse, and size, capability, and complexity measures to separate the two are subjective and relative
Data Warehouse	It is usually a data store that is designed to store data and correlate data in an optimized way to answer wide range business questions. There is no definitive boundary to distinguish between a data mart and data warehouse, and size, capability, and complexity measures to separate the two are subjective and relative
Interac	The association in charge of the Inter-Member Network (IMN).
Inter-Member Network (IMN)	A national payment network that allows consumers within Canada to access their money through Automated Banking Machines (ABM) and Point-of-Sale terminals across Canada.
ISO 8583	An interchange message specifications that is the International Organization for Standardization standard for systems to exchange electronic transactions
iSpectrum Banking System	A banking software application used as the core banking system by Valley First Credit Union
iWealthView	A banking software application used as the core banking system by

Banking System Envision Financial and First Calgary Saving

XML A simple and very flexible text format derived from SGML (ISO 8879). It is designed to meet the challenges of large-scale electronic publishing; XML is also playing an increasingly important role in the exchange of a wide variety of data.

1: Introduction

On January 1, 2010, two British Columbia credit unions, Envision Financial and Valley First, officially merged. Since both credit unions had a long history serving their respective communities, they decided to form a new top-level entity – First West Credit Union – to manage the organizational strategy and management functions while retaining the individual brand name and structure of the underlying credit unions. The merger gives the newly formed entity the much desired service area coverage and larger economies of scale, which would be difficult for either individual credit union to achieve in short term through “organic” growth. One key strategic decision to make is how the company will implement a solution to allow members to access full banking services from any branch under the First West umbrella. Shared Branching is a concept that can achieve such a solution. Currently, Envision and Valley First run two different banking systems and members of one credit union cannot access their accounts to perform banking services at the other credit union.

This purpose of this paper is to provide First West Credit Union with a recommendation on how it can implement a Shared Branching model. In the following section, we describe what a credit union is, and provide some history on First West Credit Union, Envision Financial, Valley First, and inUnison Technology Services. Furthermore, we will explain how all of these entities fit together. In chapter 2, we will define the issue First West Credit Union faces and the long-term strategic objectives of First West Credit Union. In chapter 3, we outline the desired business requirements for a Shared Branching solution and present the criteria we developed to analyse each solution. In chapter 4 – chapter 7, we introduce the four solutions we have analysed and compared. Finally, in chapter 8, we provide a side-by-side comparison of the four solutions followed by our recommendation for First West Credit Union.

1.1 Background Information

We will provide some background information in this section because we believe details, such as the origin of a credit union, the evolution of each entity, and the current position of each stakeholder, will help the readers to better understand First West's strategic position and its existing capabilities. This background information will establish a basis for the requirements of a Shared Branching service and facilitate the evaluation of various options.

1.1.1 What is a Credit Union

In Canada, a credit union is a cooperative financial institution owned and managed by its members, and its primary goal is to provide affordable and cost effective financial services to its members (Credit Union Central of Canada, 2010). The key difference between a credit union member and a bank customer is that credit union members, who have accounts and a minimum number of shares, own the credit union and are eligible to vote on major initiatives and decisions, such as the election of members of the Board of Directors. Most credit unions have humble roots, starting from their local communities; therefore, focusing on community and people has always been the key value of the credit union system. Undoubtedly, this value proposition influenced First West's decision to keep both the Envision and Valley First brand names after the merger.

In Canada, different governance bodies regulate and supervise the operation of a credit union. Traditionally, credit unions cannot operate beyond provincial boundaries. Although the federal government has announced its intent to lift this limitation from the federal credit union legislation, the provincial governance body has yet to adjust its rule to allow inter-provincial mergers or acquisitions (Credit Union Central of Canada, 2010). Historically, credit unions go through mergers and acquisitions to gain regional visibility and recognition, and regional expansion appears to be one of the key strategies of First West.

1.1.2 First West Credit Union History

First West Credit Union was the outcome of the merger between two British Columbia credit unions – Envision Financial and Valley First – in 2010.

Although the heritage of the company can be traced back to 1946, Envision was the outcome of the 2001 merger between Delta Credit Union and Fraser Valley-based First Heritage Savings of British Columbia. Table 1.1 shows that Envision Financial is the third-largest credit union in British Columbia and the fifth largest in Canada with approximately \$3.2 billion in assets and roughly 167,000 members. Envision has a network of 21 branches and 20 insurance offices throughout British Columbia, and provides community focused banking, lending, insurance and leasing service (Credit Union Central of Canada, 2009; Envision Financial, 2010).

Table 1.1 Top 20 Largest Credit Unions in Canada (by total assets), as of 2nd Quarter, 2009

Rank	Credit Union	Province	2Q 2009	4Q 2008	Members	Locations	Previous Rank
1	Vancity	BC	\$13,080,201,620	\$12,974,645,882	410,934	60	1
2	Coast Capital Savings CU	BC	\$10,230,956,101	\$10,470,422,093	427,158	53	2
3	Servus Credit Union	AB	\$9,935,513,274	\$4,623,369,395	334,850	97	3
4	Meridian Credit Union	ON	\$4,733,669,722	\$4,479,566,706	222,137	43	4
5	Envision Credit Union	BC	\$3,176,259,195	\$3,076,239,924	90,566	22	5
6	Conexus Credit Union	SK	\$3,085,112,032	\$2,869,947,862	116,687	47	7
7	Steinback Credit Union	MB	\$2,676,363,876	\$2,512,398,843	74,002	2	8
8	Assinboine Credit Union	MB	\$2,502,636,494	\$2,411,921,075	107,833	25	9
9	First Calgary Savings	AB	\$2,167,831,909	\$2,102,775,180	115,077	16	10
10	Affinity	SK	\$2,001,007,973	\$1,900,171,686	116,889	46	11
11	Altema Savings	ON	\$1,919,791,213	\$1,879,743,103	126,486	25	12
12	Cambrian Credit Union	MB	\$1,871,705,537	\$1,760,743,103	54,184	11	16
13	Interior Savings	BC	\$1,842,705,046	\$1,786,299,722	78,747	21	15
14	Prospera Credit Union	BC	\$1,840,996,401	\$1,786,788,381	45,763	16	14
15	Westminster Savings	BC	\$1,649,482,034	\$1,738,045,282	49,920	14	17
16	Coastal Community	BC	\$1,593,697,858	\$1,559,040,670	83,774	24	18
17	Desjardins Credit Union	ON	\$1,493,535,452	\$1,496,719,485	51,179	25	19
18	Valley First Credit Union	BC	\$1,470,691,846	\$1,444,398,179	47,062	15	20
19	North Shore Credit Union	BC	\$1,450,226,279	\$1,390,351,351	37,133	13	21
20	Libro Financial Group	ON	\$1,311,617,399	\$1,248,404,338	51,280	14	22

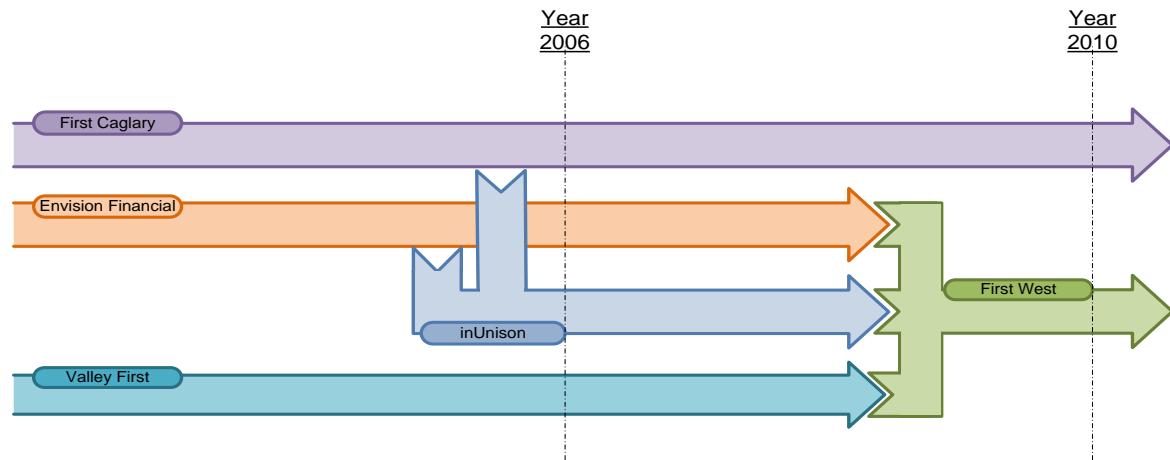
Source: http://www.cucentral.ca/Top100_10sept09

Founded over 60 years ago, Valley First is currently the eighth largest credit union in British Columbia with nearly \$1.5 billion in assets, just over 47,000 members, and 16 branches. Valley First provides preeminent financial and insurance services to communities in the Okanagan, Similkameen, and Thompson regions of British Columbia (Credit Union Central of Canada, 2009; Valley First, 2010).

Prior to the merger with Valley First in 2010, Envision Financial joined a strategic partnership with Calgary-based First Calgary Savings Credit Union in 2006. Formed in 1987 by eight open-bond credit unions, First Calgary Savings is Alberta's second-largest credit union with just under \$2.2 billion in assets, 115,000 members, and 16 retail banking branches including a Business Solutions Centre (Credit Union Central of Canada, 2009; Valley First, 2010). The two credit unions made significant effort to cooperate with each other to generate cost saving activities and more efficient processes. Envision Financial and First Calgary Savings consolidated their information technology departments and created inUnison Technology as a wholly owned subsidiary, which is responsible for IT development, operation, and support for both credit unions. inUnison has about 100 employees working in Alberta and British Columbia; the company will continue to provide IT services for both Envision and First Calgary, and it will be responsible for implementing the Shared Branching service for First West Credit Union. First Calgary is unable to merge with Envision and Valley First and join the First West family because of the provincial legislation restriction.

Figure 1.1 describes the relationship between all of the credit unions mentioned and how inUnison Technology fits in the picture.

Figure 1.1 Credit Union Relationship



Source: Created by the authors with data

1.2 Banking System History of Key Stakeholders

In 2002, Envision converted its legacy banking systems to the iWealthView Banking (iWB) system, which was developed by Fincentric Corporation. Open Solutions Canada acquired Fincentric Corp in 2007. Because of the merger of Delta Credit Union and First Heritage Savings, Envision had multiple legacy banking systems. The company decided to move to a single banking platform to improve operational efficiency and consolidate its member services under the Envision brand name.

In 2004, research conducted by an external consulting company for credit unions in United States suggested that, when compared to its counterpart credit unions in the same region, Envision would have to reach an economic scale of \$12 billion or above in terms of total assets in order to attain better performance and maintain its competitiveness. Consequently, the company began searching for strategic partners with the intention of reaching the required minimum critical mass for efficiency. The unique aspect of this proposed partnership was that each credit union would retain its original brand name. This strategy allows the credit unions to continue to promote their individual brand names, which had been cultivated over the years in their local communities. First Calgary Savings and Envision Financial entered into a partnership agreement in 2004.

First Calgary Savings opted to convert to iWB in 2006 after they completed a banking system evaluation. Since Envision was running the iWB system, it made sense

for First Calgary to have inUnison support the same banking system software for both credit unions. However, iWB is a highly customizable application, and each credit union ends up with a drastically different iWB installation modified to suit the needs of its local members and markets. Although both Envision and First Calgary Savings are running the same banking system platform, the underlying data structure and code customization are so different, it is as if they are running different banking systems.

Prior to the merger with Envision, Valley First had been working on its own banking system conversion project. The credit union spent 18 months to complete its conversion to a new banking platform, iSpectrum, by June 2009.

1.3 Banking System Platforms

'Banking system' and 'banking platform' are used as synonyms in this document, and they refer strictly to the software application used by the credit union to conduct banking services and related business activities. The days when deposits and lending details were recorded on paper with a pen are long gone. All financial services are now facilitated through computer applications and other technologies. The core banking system allows the credit union staff to expedite financial transactions, record lending details, and perform other financial services. Most banking systems also have software that interface with other applications or computer systems to enable credit unions to provide value added services such as payment systems, credit cards, Automated Teller Machines (ATM), and loans origination.

Both iWB and iSpectrum are banking systems that target small to medium sized financial institutions. iWB was initially designed and developed by Prologic Corporation. Prologic was founded 1984 in Richmond, British Columbia and later changed its name to Fincentric Corporation in 2001. Open Solutions, Inc. acquired Fincentric Corporation on May 10, 2007 (Business Wire, 2007). Open Solutions is a US financial technology solution provider based in Glastonbury, Connecticut, and its acquisition of Fincentric is believed to be a strategic move to increase the company's market share in the Canadian market. The company has committed to continue to support and develop iWB for 10 years; however, the pace of development and improvement has slowed down visibly since the acquisition.

iSpectrum is a relatively new player in the Canadian banking system market. Summit Information Systems, now part of Fiserv, Inc., first introduced iSpectrum at Credit Union Central British Columbia's fall conference in 2005 (Fiserv, 2005). Summit Information Systems focuses on providing financial solutions for US and Canadian credit unions, and iSpectrum is designed specifically for the Canadian market.

From First West's perspective, Valley First has made a substantial investment converting to iSpectrum. The long-term support for the iWB system is an obvious concern because Open Solutions' support and maintenance of the iWB system has been relatively poor since the acquisition.

Given that Envision Financial and Valley First are operating on separate banking systems, it is evident that a gap exists in the current operating model for First West Credit Union. The following chapter will present the issue and describe how Shared Branching can resolve it.

2: Strategic Issues

Since they first began in Canada in 1900, Credit Unions have competed with larger national banks (Credit Union Central of Canada, 2010). There are several reasons why people chose to use a credit union rather than a bank and vice versa. The most compelling reasons to choose a credit union are its lower interest rates, lower fees, and the impressive customer service received as a member-owner of the credit union (Weston, 2009). One of the major drawbacks credit unions experience is their lack of branches within their region and their inability to open branches across the country. Since credit unions are provincially regulated, they can only operate within one province (Freeman, 2010). This poses a serious threat and risk, as members who wish to perform banking services in other provinces are unable to do so unless they open an account with a bank. Many members choose to have an account at both a credit union and a bank. However, with the recent news that the Federal Government has announced its intent to allow credit unions to incorporate federally, there may be a resolution to this specific issue. However, there are several problems with this approach:

1. The Federal Government has only announced its intent and it could be several years before this legislation is enacted.
2. Even with the legislation allowing for the national expansion, it will be very costly to open new branches across Canada.

Unable to expand nationally, credit unions have had to focus their expansion efforts within their home provinces. The traditional way for credit unions to expand is to merge with an existing credit union. This ensures instant growth at a minimal cost compared to opening new branches and recruiting new members.

As the opening chapter highlighted, Envision Financial and Valley First merged on January 1, 2010. However, unlike most mergers, this alliance did not include a full banking system conversion. Instead, the outcome of the merger was the creation of First West Credit Union with Envision and Valley First as sub-brands. Even though members of both Envision and Valley First belong to First West Credit Union, the fact that there

was no banking system conversion means that members who have accounts with Envision are unable to perform banking services at Valley First branches and vice versa. Therefore, members will not realize the full benefits from the merger unless a full banking system conversion is undertaken.

However, as we will describe in detail in Chapter 4, a full banking conversion project is normally very costly, resource intensive, and time consuming. With that in mind, First West Credit Union would like to explore the idea of implementing a Shared Branching solution, also referred to as Inter-Regional Banking, to be able to offer all of its members access to a suite of banking services at both Envision Financial and Valley First branches.

2.1 Shared Branching

Shared Branching has been widely used in the USA but not nearly as much in Canada. In the USA, several networks have been set up to implement Shared Branching; Credit Union Service Network, which has upwards of 4,000 locations, is just one of many (CU Service Network, 2010). The closest thing to a Shared Branching network in the Canadian market is a solution provided by CUETS Financial. Yet, as we have detailed in our analysis of the CUETS solution in Chapter 6, this solution would not be applicable for all credit unions. The Shared Branching concept is that a credit union can join a network of credit unions in which members of any partner credit union can perform banking services at any of the partner credit union branches. For example, if Credit Union A and Credit Union B both belong to the Credit Union Service Network, a member with an account at Credit Union A can perform banking services at a Credit Union B branch. The types of services offered are limited to what the network has implemented and restricted, and in most cases, transactions are real-time, as if you performed them at your own credit union branch. Most networks in the USA offer the following services:

- Deposits (Cash and Cheque)
- Withdrawals
- Loan Payments and Advances
- Visa and/or MasterCard Cash Advances
- Transfers between accounts

First West Credit Union's vision is not to create a competitive landscape between the partner credit unions, or sub-brands; rather it is to offer a higher level of quality service to its credit union members. Shared Branching will help reduce the competitive advantage banks enjoy by being able to have multiple branches nationwide.

2.2 Benefits for First West Credit Union

Currently, First West Credit Union is only comprised of Envision Financial and Valley First. From a geographical perspective, Envision Financial branches are spread throughout the Fraser Valley, while Valley First has branches in the Kelowna area. If First West is to implement a Shared Branching solution, Envision Financial members will be able perform their day-to-day banking services at a Valley First branch, and the same will be true for Valley First members. However, an in-depth analysis has not been conducted to determine what percentage of members would take advantage of this service. Furthermore, First West Credit Union executives do not anticipate a high number of members wanting and/or needing this service in the next couple of years. Nevertheless, since the merger in January 2010, there have been several requests from both Envision Financial and Valley First members to be able to conduct banking services at all branches of both credit unions. We believe that, with the announcement that credit unions may be able to be federally incorporated, credit unions will either start to expand nationally or begin to partner with credit unions in other provinces and offer a Shared Branching service. Therefore, while we do not see a current need for this service, we believe Shared Branching will become the status quo in the next few years.

Additionally, we believe that being able to offer this service sooner rather than later will offer several advantages. First, member retention will increase. For members who wish to perform banking services outside of their "home branch"¹, Shared Branching may entice them to stay with First West Credit Union rather than opening an account at another credit union or bank within that region. Second, as a first-mover in the BC credit union industry, First West Credit Union may be able to attract new members because of the added flexibility of being able to bank in several geographical

¹ "Home Branch" refers to the Credit Union to which the member belongs. If a member banks with Envision Financial, then home branch refers to Envision Financial and **not** their specific branch.

locations. Lastly, having Shared Branching in place will create opportunities to find new partners to ally with First West Credit Union.

2.3 First West Credit Union Long Term Strategy Alignment

First West Credit Union's vision is to expand its membership base while still offering high quality service to all of its members and maintaining the individual credit unions' brands. As First West's website states, the goal is to "maintain ... individual local brand identities and unique grassroots approaches to providing locally-focused service." (First West Credit Union, 2010). Therefore, the strategy is to continue to provide the service that its individual credit union sub-brands have always delivered, rather than to create a new First West Credit Union brand. However, as previously mentioned, in order to offer members an exceptional and innovative service, it is necessary to offer banking services to all members at any of the branches under the First West Credit Union umbrella. In order to do so, either a full banking system conversion will need to be undertaken to convert both Valley First and Envision Financial to the same banking system, or a Shared Branching solution needs to be implemented.

For the purpose of this paper, long-term strategy is defined in terms of 5 to 7 years. With the anticipated legislation allowing credit unions to be federally incorporated, we believe that the industry will be reshaped within the next 10 years. First West Credit Union's long term strategy is to find ways of aligning product offerings with each sub-brand and, most importantly, undertaking activities that will eventually lead to cost savings for the business and for the members. Moreover, while there are currently only two sub-brands, the opportunity to add additional sub-brands / partners will be investigated with the hope of expanding First West's geographical reach. First West Credit Union does not plan to become a Credit Union Service Network whereby it would indiscriminately add credit unions as partners across the nation; rather, it will be looking to add only partners that align with its goals and values and that would augment the First West Credit Union brand.

Shared Branching could be the answer to help First West Credit Union to achieve its long-term strategic goal. There are various networks setup to enable Shared Branching between numerous credit unions in USA, and we believe it is only a matter of

time for the Canadian credit union industry to move in the same direction. Before we can analyse each potential solution for implementing Shared Branching, we will first establish an evaluating criteria based on the requirements collected from First West Credit Union in Chapter 3, and we will use this criteria to analyse each solution presented in Chapter 4 – Chapter 7.

3: Requirements and Analysis Criteria

This chapter will describe the desired functionality of the proposed Shared Branching solution and an outline of how each of the solutions will be analysed. Also, we conducted several interviews as part of our research to obtain the necessary information to perform a complete analysis.

3.1 Business Requirements

In order to understand the reasons behind the decision to search for a Shared Branching solution, we spoke with Shelley Besse, First West Credit Union VP of Transition. Shelley has been working with executives from both Valley First and Envision Financial to try to define what the solution should look like and what the scope of member services should be. However, the discussions among the executives are still in progress and the requirements are still being finalized. Therefore, we have defined the requirements based on the initial conversations that the executives have had. Shelley Besse has signed off on these requirements. Any changes to the requirements mentioned below will be outside the scope of this paper.

Research into existing Shared Branching solutions has helped define the requirements. Most of the existing solutions have been implemented in the US. We have assumed the services offered in the US will be similar to the services offered to First West Credit Union members. The following services are the desired functionality for a Shared Branching solution:

- Deposits (Cash or Cheque)
- Withdrawals
- Loan Payments and Advances
- MasterCard Cash Advances
- Transfers between accounts

Members can perform many other types of transactions at their home branch, and if any of these transactions can be performed manually at another branch, they will be offered as additional services. For transactions and or services that are not supported or cannot be done manually, members will be informed that they will have to return to their home branch to perform those services. An example of a service that is not required for the Shared Branching solution and is not possible to process manually is a loan application. If a member wishes to apply for a loan at a different branch, the member will be given two options:

1. The member can open a new account with the branch and apply for the loan
2. The member will have to wait until he/she returns to his/her home branch to apply

Our discussions with Shelley have led us to believe that the number one priority when selecting a solution for this initiative is the capital and operational costs. Executives from both Valley First and Envision Financial do not believe that many members will make use of this service, and therefore they do not wish to spend considerable amounts of money implementing a service that may not provide much value to most members.

Another important requirement is that the solution must be scalable. We define scalability in two ways. First, the solution must be able to support additional functionality / services in the future, and second, the solution must be able to support additional credit union partners that may join First West Credit Union in the future. As well, it should be relatively easy to add supplementary features and additional credit unions

The business requirements are helpful in aiding us to understand what First West Credit Union seeks to obtain from a Shared Branching solution. Since we will be presenting multiple solutions, it is important to understand each of the solutions in a similar manner. The next section describes how we have structured our analysis.

3.2 Solution Analysis Outline

In Chapter 4 – Chapter 7, we will present and analyse various solutions using the same criteria. There are many published examples of software selection criteria;

however, these examples are for very specific types of applications, such as Enterprise Resource Planning (ERP). To ensure that we have captured and analysed all the necessary information that would be beneficial to First West Credit Union, we have developed the following outline with the assistance of Marina Ma, InUnsion Technology, Director of Development and Operation.

1. Gap Analysis

For any technical solution, the primary concern of First West Credit Union is how well a solution addresses the business requirements. A solution has to meet or exceed all the core requirements in order to be considered for further evaluation. Even if a solution fails to answer only A Shared Branching solution will be a new feature for First West members; therefore, the gap analysis focuses on the functionality of each solution where requirements cannot be met.

2. Cost / Benefit Analysis

Cost is one of the most important considerations for the executives of First West Credit Union when evaluating a solution. The cost analysis will identify the capital and operational costs. Furthermore, it will highlight what the cost is to acquire an additional partner to the First West Credit Union family. The benefit analysis is meant to outline the benefits that are applicable to First West Credit Union and its members.

3. Risk Analysis

The risk analysis will help First West Credit Union decide if the solution is worth implementing based on the level of risks associated with it. A risk rating is provided for each solution to help determine the severity of the risks. The risk analysis focuses on the risks to First West Credit Union's operation and impacts on services provided to its members.

4. Resource Analysis

If a Shared Branching solution is implemented, First West Credit Union needs to understand how many resources will be tied up for implementing the solution. The resource analysis will detail the internal and external resources

that are required to implement the solution. The internal resources are comprised of First West Credit Union, Envision Financial, Valley First, and inUnison employees; external resources are comprised of resources provided by the vendor to work on the solution.

5. Implementation

First West Credit Union needs to understand the complexities associated with implementing a solution. Together with the resource analysis, the implementation details will provide an indication with regard to what is involved to complete a solution. Also, the implementation section will provide an estimate for the time required to implement a solution, which gives insight on efforts taken away from driving revenue and servicing members.

6. Business Alignment

The most important attribute is how well a solution aligns with the business needs. The solution has to make both technological and economic sense for the business, and we have to assess each solution holistically for strategic appropriateness so the information and recommendation would be most relevant to First West Credit Union. We have broken down this section into four sub-categories to help readers gain a systemic and consistent understanding with regard to how well each solution aligns with the business needs. The four sub-categories are:

- Cost
- Proven Solution
- Reliability
- Scalable to support future mergers

This criteria represented by this outline are generic and applicable to any type of software; therefore, they could be used for future software selection projects at inUnison. In order to apply all of these tools, we must have sufficient information. The following section describes the methodology of how we have obtained this information.

3.3 Methodology

In order to obtain accurate information for each solution we analysed, we conducted several interviews with key stakeholders for each solution. In addition, both authors have been working for Envision Financial and inUnison Technology Services for the past 5 years and have accumulated internal knowledge by working with various vendors and partners in the credit union industry over the last 10 years. Therefore, the majority of our analysis is based on data collected from these interviews and knowledge gained through our work experience in the credit union industry. Below, we provide an outline for all the interviews conducted with regard to the time, the location, the format, and the people being interviewed.

We interviewed Marina Ma, Director of Development at inUnison Technology Services, in early April to gain an understanding of the Shared Branching initiative and to get her insight into the project. Furthermore, we strategized how we should structure the paper to meet the objectives of both inUnison Technolgy Services and First West Credit Union. We met with Marina several times over the next few weeks to narrow down the stakeholders, and Marina helped us gain access to data and resources within inUnison, First West Credit Union, Envision Financial, and Valley First.

We first interviewed Shelley Besse, Vice President (VP), Transition at First West Credit Union, on May 4, 2010. Shelley is actively working with executives from Envision Financial and Valley First to define the scope of a Shared Branching solution. The purpose of the interview was to understand the reasons behind implementing a Shared Branching solution as well as to clarify the timeline, the project scope and the business requirements for implementing such a solution. Between May and June 2010, we had several informal phone conversations with Shelley regarding the project.

We had a phone interview with Kathy Boxall, Assistant Vice President (AVP), Transition Support at First West Credit Union, on May 28, 2010. Kathy was part of the Valley First banking system conversion team prior to joining First West Credit Union. The purpose of this interview was to obtain details with regard to the Valley First conversion to the iSpectrum banking system, which would work as a base for the analysis of a banking system conversion. After our initial interview, we exchanged emails on several occasions to confirm various assumptions we made.

On May 27, 2010, we contacted CUETS Financial Services in regards to the CUETS Enhanced Branch Services solution. Due to the relationship between inUnision and CUETS, there were several issues obtaining information without compromising any corporate confidentiality regulations and exposing proprietary information. On June 2, 2010, we had a phone conversation with the Vice President and Assistant Vice President of Partner Enhanced Services. The purpose of the interview and various email conversations, was to understand how the CUETS Enhanced Branch Services model works, what costs are associated with the service, how credit unions can implement it, what limitations and restrictions exist, and how the introduction of chip cards can affect the service.

We met with Central 1's Senior Systems Integration Architect on June 7, 2010. We had a brainstorming session to generate ideas of how Central 1 can use existing products to develop a custom solution for First West Credit Union. The outcome of the meeting was various takeaways for Michael to determine the feasibility of such a solution and provide high-level cost estimates. We attempted to contact Michael various times after this interview, but we were unsuccessful in obtaining further information that was relevant to our analysis.

These interviews were critical in analysing the solutions presented in the next chapter. All of the interviews conducted were informal but provided us the information needed to complete an in-depth analysis. Since the solutions analysed were very different in nature, we did not develop a set of standard questions for each interview; rather, we conducted each interview with a few basic questions and used our expertise in that area to help us determine all follow-up questions.

In chapter 4 – chapter 7, we will present four different solutions that we have researched and analysed. Due to time constraints and prior commitments from vendors and business executives, we were unable to access all the relevant information for some of the solutions. Therefore, we have had to make some assumptions and estimates and have noted these in the relevant sections.

4: Banking System Conversion

One way to achieve the Shared Branching service is to convert all First West Credit Union's banking systems to a single banking system. In this case, Shared Branching is not necessary since all of the credit unions would be running the same system and have access to all member data. This is how all major banks provide banking service across the entire country. We have used the criteria established in Chapter 3 and feedback gathered from the interviews with First West Credit Union executives to evaluate the feasibility of a banking system conversion.

4.1 Gap Analysis

Converting all existing banking systems into one system would give the members of First West Credit Union the ultimate Shared Branching capabilities; therefore, the gap analysis is not applicable.

4.2 Cost /Benefit Analysis

4.2.1 Costs

A single banking system can be realized in two different ways. Currently, Envision uses the iWB, and Valley First has just converted to iSpectrum. Either First West Credit Union can move both Envision and Valley First to a new banking system or it can convert one credit union to the other credit union's existing banking system. Because of limited access to financial data, we used the conversion breakdown costs from the Valley First iSpectrum conversion, and we have used it as a baseline to calculate potential costs for the two previously mentioned options.

Table 4.1 Valley First Banking Conversion Cost Breakdown

Description	Cost	Comment
Capital investment for Banking System and Licenses	\$ 1,075,972	iSpectrum banking system software license
Capital investment for infrastructure and supporting software	\$ 762,819	Includes operating system licenses, backup software, system monitoring software and disaster recovery system etc.
Expenses	\$ 763,768	Including resources and other related expenses
Resource Cost	\$ 2,880,000	Valley First conversion taking 18 months (Approximately 360 work days) Assuming 20 people work 8 hours a day, and the average hourly rate is \$50
Total	\$ 5,482,559	

Source: Valley First Asset Summary June 16, 2010

Rounding up the total from Table 4.1, Valley First's conversion to the iSpectrum banking system cost \$5.5 million. We assume that, compared to converting one credit union to the other's banking system, converting both Envision and Valley First to a new banking platform will generate certain cost savings because much of the software and supporting resources could be shared. We have estimated that multiplying the Valley First conversion cost by a factor of 1.5 would provide a good estimate of converting two credit unions to the same system. Many of the conversion tasks will be different for each credit union. However, many lessons will have been learned from the Valley First conversion that will reduce the resources and time required to replicate the solution in a second credit union. If we multiply \$5.5 million by 1.5, we get \$8.25 million.

Table 4.2 Banking System Conversion Cost Estimate

Description	Cost (Millions)	Comments
Option 1: Single Conversion	\$5.5	Either to convert Envision's banking system to iSpectrum or convert Valley First to iWeathView Banking
Option 2: Total Conversion	\$8.25	Convert both Envision and Valley's existing banking systems to adopt a single new banking platform organization wide

Source: Created by the authors

4.2.2 Benefits

Single system synergy

A single banking system produces a positive synergy inside the organization. Rather than doing support, training, and integration for two different banking systems,

the organization will only need to maintain one system. Consequently, it can focus more time and resources on improving the business itself. The synergistic influences extend beyond the banking system. A single banking system will help the company unify other auxiliary business applications, such as having one loan origination application, one lending application, one sales tracking system and so on. The long-term cost savings may be compounded because the time and resources saved due to the improved efficiency can be funnelled into other growth oriented business activities.

Business Intelligence

After the banking system conversion, the organization will have one banking data source for any business intelligence initiative. Generally, it is more practical to design and sustain a meaningful business intelligence system that benchmarks business performance organization-wide with one master data source. Multiple data sources drastically increase the difficulty and complexity involved in designing and maintaining a functional business intelligence solution. In addition, the underlying data structure differences might make data conformation an impossible task. Consequently, the incongruent information produced by various business intelligence systems might be difficult for the business to compare and interpret, and therefore have negative impacts on informative business decisions.

Technology maintenance and support benefit

A single banking system will reduce the banking system support and maintenance costs. It will most likely drive the organization to consolidate other banking system related applications and support functions, which will further reduce the technology operating costs. Generally, the costs are hidden operational costs, but reducing them often represents significant long-term savings for the organization.

4.3 Risk Analysis

Project is extensively complicated

A banking conversion project is extremely complex and time-consuming. The banking system is the credit union's core business application system, and essentially, it should be tightly integrated with all other business operation applications and processes. However, the tighter these links are, the more complicated the conversion project would

be. Often, the conversion project becomes a chain reaction; the scope of project expands exponentially because supporting and auxiliary applications need to be upgraded, converted or re-developed as well as the core banking system itself. Consequently, the project timeline gets prolonged and the project costs continue to increase. As much as the project team has prepared for the worst and done exhaustive homework before progressing to the implementation stage, it is rare not to run into obstacles that are buried in minor technical details that send the team back to the drawing board.

High capital expenditure

Most banking conversion projects for a credit union the size of Envision Financial take one to two years to complete. This long initiative quickly drives up the expenses for the project, and has enormous implications for the balance sheet and financial wellbeing of the credit union. Therefore, such projects require significant commitment from all levels of management and tight control of the company's cash flow.

High Member Impact

A banking conversion normally has high member impact because the replacement of the core banking application affects how members perform their usual banking routines. Potentially, a member might need to deal with a new telephone or Internet banking system or experience poor customer service because the staff has not adjusted to the new system.

4.4 Resource Analysis

Resources will be drawn from both First West Credit Union and the banking system vendor to develop and implement this potential solution. First West Credit Union will most likely supply the following resources to ensure the delivery of this solution.

- Business sponsor / Steering committees
 - Provide the required resources and funding for the project
 - Make key decisions as required
- Project manager
 - Oversees the project development progress
 - Coordinates resources and manages potential risks and milestones

- IT architects
 - Ensure the architecture of the new product is technically sound
 - Ensure the new product would not impact other business applications and is capable of future expansion and integration with other products
- Business analysts and business subject experts
 - Document the existing banking process and practices
 - Understand how the new banking system functions and how it will handle various existing banking operations
- Database administrator and developers
 - Understand the data structure difference between the old and new banking systems
 - Work out data conversion details to transfer the banking data from the old system to new system
- Banking system developers
 - Work with the new banking system vendor to do the necessary customization
 - Possible development to gateway interfaces to ensure other supporting applications will function with the new banking system
- Quality assurance engineers
 - Test the new system and ensures the new banking system is ready for production use
- Trainers and business pilots
 - Train branch staff to use the new system
 - Pilot the system to identify all business process problems
- Infrastructure engineers
 - Install and set up various banking system environments

4.5 Implementation

Assuming that the credit union has done its due diligence and selected a banking system based on appropriate features, operating costs and technology architecture, regardless of the option selected, a credit union would probably tackle the implementation by performing in the following steps.

Define scope the project. The company has to define the scope of the project. This would include the core banking system itself, an inventory of all business applications, and an assessment of the dependencies and connections between the current banking system and each of these applications. The company needs to understand the implications of changing the core banking system for each extant business application or process to determine what will have to be included in the conversion scope and what will not be affected by this conversion.

Create development/customization and quality assurance environments. Purchase development and quality assurance hardware and software that will be used to test the functionality of the new banking system.

Convert banking data. Dedicate resources to evaluate the banking data and develop a roadmap for converting existing banking data to the new banking system.

Training pilot staff and business units. Identify who will be part of the pilot program and training sessions to familiarize them with the new banking system structure and operation.

Mock Conversion. Banking conversions are risky. It is extremely difficult to reverse the process once the conversion commences. Therefore, a mock conversion, also referred to as a dry run, is usually completed a few weeks prior to the actual conversion. Once the mock conversion is complete, the pilot staff will simulate a day's worth of transactions to ensure the system is functioning as expected. This also provides an opportunity for the staff to become familiar with the new system.

Final conversion. The conversion usually occurs on a long-weekend, when there is ample time to troubleshoot any issues that may arise. Once the conversion is complete, there is usually a stabilization period during which both staff and members get used to the new system and processes.

4.6 Business Alignment

Cost

A banking system conversion is very costly. No matter which option the credit union chooses, a banking conversion is a multi-million dollar project. Envision's yearly banking system maintenance cost is around \$1 million, and Valley First has budgeted \$2.6 million for banking system maintenance for 5 years. Adding a \$5 to \$8 million conversion initiative on top of the existing expenditure is a very heavy financial burden for First West Credit Union and therefore requires extreme care and tremendous commitment from all levels of the management team.

Proven Solution

Banking system conversions are a proven practice for mergers. Shared Branching is not an issue after the banking conversion because the entire organization is on the same system. Both Envision and Valley First have gone through several banking system conversions in the past. Envision converted to the iWB system after First Heritage and Delta Credit Union merged in 2001. Excluding consideration of the price tag, running a single banking system across the entire organization is probably the ideal situation for the organization because it results in efficiency and synergy, which are highly desirable for the long-term healthy growth of the company once it reaches certain economies of scale.

Reliability

The reliability of a banking conversion relies heavily on the system chosen and the amount of customization applied. With various banking systems to choose from, we cannot specify how reliable a banking conversion could be. Some systems are very reliable while others are not. The Shared Branching operation is native to the system because all members are using the same banking system. However, members and staff always report problems or make suggestions for enhancements to whatever system is being used. Therefore, while a single banking system for all credit unions may experience several issues, it would be more efficient and cost effective than having each individual credit union on different systems.

Scalable to support future mergers

A banking system conversion does not necessarily provide any cost saving for the next merger. Depending on the size of the merger and the party that is going be merged with

First West Credit Union, the organization has to repeat the analysis and arrive at a conclusion based on actual strategic priorities in play at the time. Nevertheless, the decision made for the current Envision and Valley First merger probably will bear some weight for the outcome of the next merger decision.

A banking system conversion has the benefit that both credit unions will be running the same system, so the member information is accessible across the entire organization; however, the high costs and long implementation cycle do not align with First West strategic objectives.

5: Central 1 Custom Solution

Central 1 Credit Union (Central 1) is a service provider for credit unions in Canada. Formally known as Credit Union Central of BC and Credit Union Central of Ontario, Central 1 was created out of a merger of the these two companies in 2008. Central 1 does not provide any direct member services; rather, it provides services to its member credit unions in British Columbia and Ontario. Most of Central 1's services are value-added financial services such as liquidity management, payments, Internet banking and trade association services.

Central 1 has developed an Internet banking service, MemberDirect, which it offers to credit unions. Instead of each credit union designing, developing and implementing individual Internet banking solutions, MemberDirect is a common backend transaction platform that can interface with any banking systems through ISO 8583 standard² and XML (Extensible Mark-up Language) messages.

Central 1 currently does not have a product that could perform the services required by First West. However, we explored the idea of integrating various Central 1 products and services to provide a custom solution that *may* fulfil the requirements. In order to determine the viability of Central 1's potential solution, we will use the criteria introduced in Chapter 3 to assess the strategic alignment of the potential solution from Central 1.

5.1 Gap Analysis

Not an existing Central 1 product

Central 1 has created a robust, yet scalable transaction exchange platform that allows various banking systems to interface with each other or with third party clearance, payment and money transfer systems. It is a viable technical solution. Its core

² "ISO 8583 standards" is a financial message exchange specification.

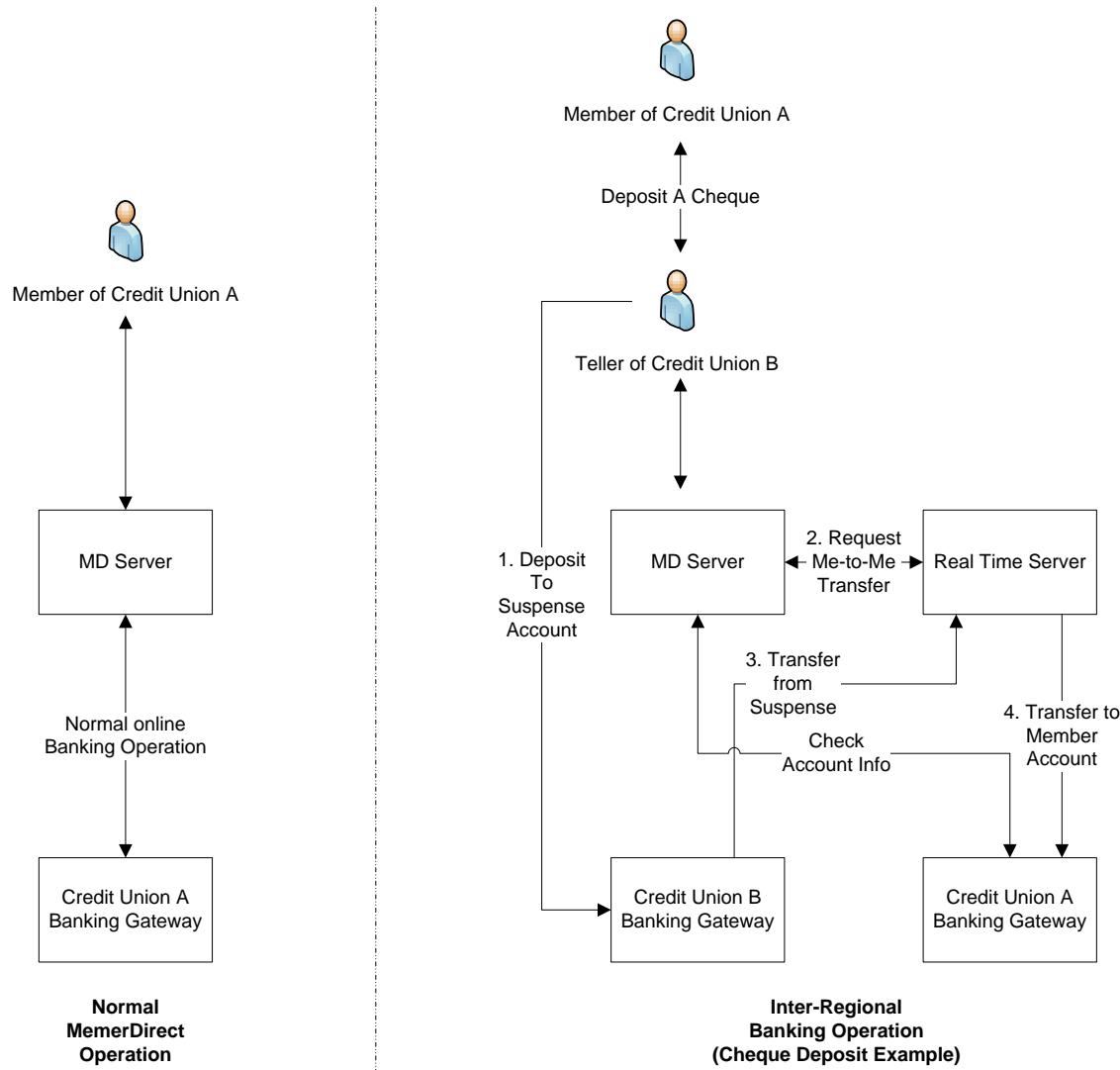
infrastructure provides Internet banking service to members and branch personnel should be able to perform similar tasks using the same platform.

MemberDirect is the online banking solution that both Envision and Valley First have implemented and provide to their members. Members can easily perform day-to-day banking services securely and reliably at their leisure from any Internet enabled computing device through a web browser. What the Shared Branching solution requires is a teller-operated version of MemberDirect that allows the teller to view a member's account information without entering the security protections that are required when the member logs in.

Moreover, Shared Branching services, such as cheque deposit, require the creation of specific credit union, non-member accounts (suspense accounts) and the implementation of Central 1's real-time transaction service, which is not part of the current MemberDirect product. Me-to-Me is another product offered by Central 1 for real-time cheque clearance and cash transactions across different credit unions. Enabling a teller of Credit Union A to perform operations such as cash advances and cheque deposits for a member of Credit Union B without knowing the member's private identity authentication, will most likely require the integration and customized development of MemberDirect and integration between the customized MemberDirect and Me-to-Me service.

When a member uses MemberDirect to perform online transactions, messages are exchanged between the MemberDirect Server and the members' home banking system. The situation gets much more involved when a member from Credit Union A walks into a branch of Credit Union B to request a Shared Branching service. Using cheque deposits as an example, the process is illustrated in Figure 5.1 and detailed in the steps below.

Figure 5.1 Depositing a cheque using Shared Branching Central 1 Solution



Source: Created by the authors with information gathered from interview with staffs of Central 1

Step 1: The teller verifies the member's identity and pulls the member's account information using customized MemberDirect

Step 2: The teller deposits the cheque into a suspense account in Credit Union B's banking system for Credit Union A

Step 3: The teller initiates the real-time Me-to-Me transfer on the Real Time Server

Step 4: The funds will be transferred from Credit Union B's suspense account to Credit Union A to the Real Time Server

Step 5: The amount is deposit to member's account by the Real Time Server

Step 6: The teller is able to use MemberDirect to pull the member's account information and verify that the money has been successfully deposited

Although technically capable of performing any Shared Branching services, Central 1 has to modify and integrate its standard products in order to provide the functionality required for Shared Branching.

Unable to handle credit card cash advance

Credit Card cash advances have been listed as one of the required Shared Branching services; however, Central 1's existing products have no means to handle such requests.

Possible change of the Internet Banking Scope

Currently, Internet Banking is a member selected service and only available for members that have requested it. Central 1 charges credit unions based on the total number of members using MemberDirect for Internet Banking. Depending on the service model, First West might need to enable the MemberDirect service for all members and therefore increase the total on-going operating cost for MemberDirect.

5.2 Cost /Benefit Analysis

5.2.1 Costs

There is no existing pricing framework for Central 1's potential solution because Central 1 does not currently offer a single product that provides all the functions for Shared Branching. The best we can do is to deduce the cost for a potential solution based on the current MemberDirect pricing schedule. Table 5.1 identifies the estimated costs for developing a custom solution.

Table 5.1 Central 1 Custom Solution Costs

Description	Cost	Comment
Development Charge	\$125 / hour for development \$165 / hour for senior resource and project management	Member credit unions pay 0.019 per transaction for development fee as part of member fee regardless of which service they are using.
Implementation Charge	Average \$18,000 to \$22,000	Customization fee is based on the time and materials at current hourly rate
Operation Charge	Retail Service \$0.09 per member per month	Some of the fees are not charged to the credit union's chequing account with Central 1, and they could be invoiced monthly by Client Support, MemberDirect Services.
	Business Service Fixed Fee: \$416.67 + \$200 per business per month	The charge is significantly lower when the total business memberships are lower than 100. Central 1 will only charge at the rate of \$200 per business per month when the total memberships are over 100.

Source: 2009 MemberDirect Fee Schedule

Development cost has the most variance in this case because Central 1 would have to develop a brand-new product in order to meet First West Credit Union requirements. We have estimated that the project requires four various levels of management and technical resources to work full time for four months (17 weeks). Assuming a 35 hour work week, the total number of labour hours would be:

$$4 \text{ resources} \times 17 \text{ weeks} \times 35 \text{ hours} = 2,380 \text{ hours}$$

In order to provide a realistic estimate, we will calculate the average development rate and multiply it by the total number of hours. Therefore, the total development cost would be:

$$[(\$125 + \$165) / 2] \times 2,380 \text{ hours} = \$345,100$$

This service will need to be implemented for both credit unions; therefore, we have used the highest implementation charge for budgetary purpose. The total implementation charge would be:

$$\$22,000 \times 2 = \$44,000$$

The current recurring fee is about \$20,000 per month for Envision. Assuming that Valley First pays a similar monthly fee for MemberDirect services, the total monthly operating fee for First West Credit Union would be \$40,000. With the implementation of

a custom Shared Branching solution, we have assumed that the on-going operating cost would go up by 25%. The increase is estimated to be as high as 25% because Central 1 would be developing a customized solution for First West. This will not be a standard product offered to other credit unions, and so it is expected that Central 1 will have to implement various applications that are only relevant for First West and cannot be used for other credit unions. Therefore, the additional monthly charge would be \$10,000, and the yearly operating cost would be:

$$\$10,000 \times 12 = \$120,000$$

In addition, assuming that First West Credit Union has four people working on the project at an estimated 50% utilization, and an average hourly rate of \$30 per employee, the total resource cost would be:

$$4 \text{ resources} \times 17 \text{ weeks} \times 17.5 \text{ hours} = 1,190 \text{ hours}$$

$$\$30 \times 1,190 = \$35,700$$

Since this calculation is an estimation, we have added a contingency of 15% to the final numbers. The final breakdown of the costs is presented in Table 5.2.

Table 5.2 Estimate Central 1 Solution Costs

Description	Cost
Development Costs (\$354,100 x 15%)	\$ 396, 865
Implementation Costs (\$44,000 x 15%)	\$ 57, 200
Internal Resource Costs (\$35,700 x 15%)	\$ 41, 055
Total	\$ 495, 120
On-going Yearly Operating Costs	\$ 120, 000

Source: created by authors

As indicated in Table 5.2, we have estimated that it would cost \$495,120 to develop and implement a Shared Branching solution by customizing Central 1's current products. Furthermore, First West Credit Union can expect a \$120,000 increase in on-going operating costs.

5.2.2 Benefits

Technology Benefits

Both Envision and Valley First are existing members of Central 1, and they both use MemberDirect as their online banking solution. Consequently, a potential Shared Branching solution from Central 1 suggests long-term savings in terms of technology adoption, infrastructure set-up, and network configuration. The future Shared Branching solution can leverage the same set of gateway servers to interface with MemberDirect servers. As well, the existing network connectivity between First West Credit Union and Central 1 that is established for secure communication between the banking systems and MemberDirect servers can be used for the Shared Branching service. The fact that both Envision and Valley First already have their own network connection to Central 1 creates the desirable system redundancy for this Shared Branching solution by default.

Operational, support and training benefits

A Central 1 solution based on MemberDirect and Me-to-Me will avoid many costs associated with training and educating credit union staff and members. Existing technical resources are already responsible for network and server support for the MemberDirect system, and both tellers and members are already intimately familiar with the functionality and operation of the MemberDirect user interface. Thus, the business does not have to invest nearly as much as it would if it were to introduce a brand-new solution, which always requires intensive knowledge transfer and in-depth communication. Training related issues are often the major reasons that cause an unsuccessful launch of a new product or service.

5.3 Risk Analysis

Customized development introduce risks in terms of project time and cost

It is very difficult to estimate the required workload for delivering a customized product with a high degree of accuracy. The numbers used for the cost analysis are assumptions based on the existing MemberDirect product; therefore, a complete development estimate may substantially deviate from the provided development and implementation costs. If the actual time spent to deliver such a project is prolonged significantly over the anticipated timeline, the project might not make economic sense when compared to other alternatives. The business might have to face a tough decision

between continuing to develop the product and bearing the extra costs or cancelling the project and writing the incumbent spending off as sunk costs.

Potential impact to existing online banking service due to the gateway upgrade and customization

The new product is essentially an integration of existing Central 1 products – MemberDirect and Me-to-Me transfers. Envision's current Internet Banking gateways interface with the MemberDirect server using an older version of communication protocols (MemberDirect 1000), and has to be upgraded to the most current version (MemberDirect 2000) in order to support the new real time Me-to-Me product. Several attempts have been made to upgrade Envision's Internet Banking gateway to the MemberDirect 2000 version. However, on all three occasions in the past four years, the upgrade has been unsuccessful for various reasons.

The teller version of the MemberDirect system, which allows the teller to log into any member's account and perform online banking services, will be an additional component sitting on top of the existing MemberDirect system, which is member facing only. Therefore, the extra customization introduced could have a negative impact on the existing MemberDirect service.

First mover risk

Since Central 1 will be developing a custom solution, First West Credit Union will be the first, and possibly the only, credit union using it. There could be unknown implications that Central 1 did not anticipate, and the stabilization period could be longer than predicted.

Potential conflict with Central 1's own product offering in the future

During our preliminary discussion with Central 1, they were planning to consolidate their product offerings and develop a new product. The new product, with the working name CUDirect, will address the increasing demand for a solution similar to Shared Branching to enable financial activities among its member credit unions. Potentially, Central 1 could develop a product that might have many of the characteristics of the customized Shared Branching solution. At that point, the customized solution could be

too expensive to maintain, and First West Credit Union might have to implement this new product and forfeit the customized solution and previous investment.

5.4 Resource Analysis

First West Credit Union and Central 1 will both contribute resources to develop and implement this potential solution. First West Credit Union will most likely supply the following resources.

- Project manager
 - Oversees the project development progress
 - Coordinates resources and manages potential risks
- Business analyst
 - Works with Central 1 to ensure all business requirements have been met
 - Understands how the settlement process and cash flow will work
 - Understands how the new system will work for staff
- Quality assurance
 - Ensures the product specification is met
 - Thoroughly tests the new solution to ensure the product quality is up to commercial use
- Banking system developer
 - Works with Central 1 to understand how the service will work and what technical impacts for the current banking system exist
 - Possible development work on current Internet Banking gateway interface
- Technical architect
 - Works with Central 1 to ensure the architecture of the new product is technically sound
 - Ensures the new product will not impact other business applications and is capable of future expansion and integration with other products
- Infrastructure engineer
 - Oversees product rollout if there are extra server and network adjustments required

- Deploys the new customized code

5.5 Implementation

The Central 1 solution will not be a standard product offering and will require customized development and deployment. The project will most likely go through the standard new product development cycle, which generally involves the following stages:

- Project management
- Requirements gathering
- Feasibility analysis
- Architecture design
- Product development
- Quality Assurance
- Documentation and training

After assigning a project management resource, the project team will gather the detailed business requirements and evaluate the feasibility of the project to determine whether to proceed with further design and development. It is critical to understand the overall operating and financial implications of the project to ensure that the business does not undertake unnecessary risks.

The business process and technical architecture resources are required to layout the process and technology designs properly because these will be used as the blueprint for further development. Milestones must be established for benchmarking the product development progress, and appropriate quality assurance testing will be performed concurrently with development to ensure the product is reliable for business operation.

The system could leverage the existing MemberDirect servers and banking gateways if the capacity of those systems is sufficient to handle the extra functionality and load. However, customized configuration and code deployment will have to be implemented in those environments to accommodate the extra features for Shared Branching.

5.6 Business Alignment

Cost

Envision and Valley First, as current members of Central 1, are paying membership fees and charges for various services, such as MemberDirect. Moreover, both credit unions have invested in the infrastructure to support banking system gateways and maintain network connectivity with Central 1. These existing investments will be protected if the company acquires a Shared Branching solution from Central 1 because most of the infrastructure can be retained. Since Central 1 already has a backend transaction exchange platform and First West Credit Union has been working with the same platform for quite some time, the overall time and funding required for a potential Central 1 solution would probably be less than introducing a new solution.

Proven solution

The potential solution is based on MemberDirect and Me-to-Me transfer technology. Both of these are mature products that have been offered to credit unions by Central 1 for a number of years, and their stability has been proven in the market. Therefore, the overall technical viability of basing a new integrated platform for Shared Branching on these two products is reasonably promising, and the risks associated with creating a custom solution are manageable.

Reliability

It is hard to assess the business reliability of a potential Central 1 solution precisely because it is not currently a product in the market. However, we can predict the general reliability of a potential Central 1 solution reasonably well. Both Envision and Valley First have been members of Central 1 for a long time, and they have been using MemberDirect as their online banking platforms for a number of years. In general, Central 1's support for business initiatives and technology problems has been satisfactory and dependable. Rather than taking the risks associated with third party products and developing new business relationships, First West Credit Union can trust and expect reliable local service and support from Central 1.

Scalable to support future mergers

Since the customized development is based on the common backend transaction platform supported by Central 1, merging with other credit unions in Canada, especially those that already subscribe to MemberDirect services, would be relatively easy. First

West Credit Union can offer the Shared Branching solution as an attractive selling point to acquire other credit union partners. However, the scalability is somewhat restricted because First West Credit Union will depend on Central 1 to provide the core transaction exchange management and interface development, which might not be as flexible and cost-effective as First West Credit Union would like it to be.

Envision Financial and Valley First currently both use MemberDirect service from Central 1 as their Internet banking platform. However, Central 1 does not offer a product that has the ability to provide Shared Branching features at this time. Central 1 would have to develop a custom solution to meet the Shared Branching requirements for First West Credit Union. Custom solutions have the benefits to suit most of the business needs, but they are also costly in terms of development and maintenance. However, one of the prime benefits of a potential Central 1 solution is the ease of adding new credit union partners.

6: CUETS Enhanced Branch Services

CUETS Financial (CUETS), a division of MBNA Canada Bank, is a service partner in the Canadian credit union system. They produce MasterCard® products and offer Credit Union Member Card® debit cards. CUETS partners with other card production suppliers to provide the card plastics and they assist with all the functions in the card production process. The card production process consists of:

1. Helping the credit union with the card plastic custom design
2. Submitting the credit union daily card orders for production
3. Embossing the card plastics with the relevant information (for example, the cardholder's name)
4. Mailing the card to the member or branch
5. For MasterCard products:
 - a. Managing the phone activation process
 - b. Managing the lost / stolen card process

Further to the card production process, CUETS also provides devices that are used to change the Personal Identification Number (PIN) on the card. These devices are called CUETS Enhanced Branch Services (CEBS) Card Devices, and each has a dedicated connection from the credit union to CUETS. When the PIN is changed on a Magnetic Stripe Card, the new PIN does not need to be synchronized with CUETS; however, with the new CHIP Cards³, the PIN is generated using information that is stored at CUETS and then synchronized with CUETS for verification purposes. When speaking with CUETS to learn more about the service, we were told that the technology is proprietary and limited information could be provided. Therefore, some assumptions have been made.

The infrastructure already exists to send information to CUETS for CEBS cards devices. CUETS saw an opportunity to implement a new service that would allow credit

³ New microchip embedded debit or credit cards

unions to process transactions for cards that belong to other participating credit unions in Canada. This service would allow members of a credit union to perform various transactions at other credit unions across Canada, most of which they are unable to do at an Automated Teller Machine (ATM). The following transactions are supported by CEBS:

MasterCard®:

- PIN Changes
- PIN Unblocks
- Chip-Card Diagnostics
- Payment Transactions on CUETS Financial-issued MasterCards®
- Cash Advances on all Chip and Magnetic Stripe MasterCard® products

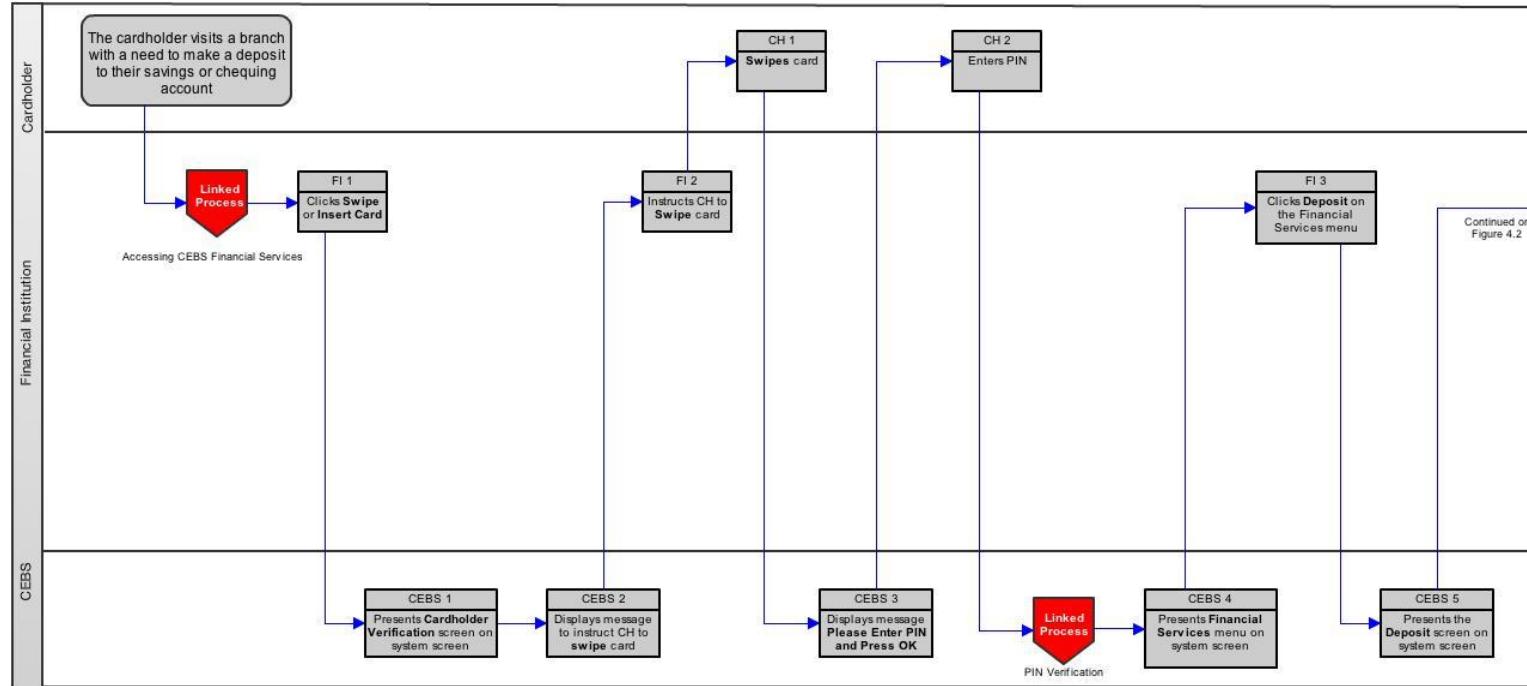
Member Card®:

- PIN Changes
- PIN Unblocks
- Chip-Card Diagnostics
- Withdrawal
- Deposit
- Balance Inquiries

With the CEBS solution, any Magnetic Stripe card can be used to process Member Card® transactions; however, only CUETS Financial-issued Chip Member Card® can be used to process transactions, and no other Chip Member Card® can be processed. Credit unions that offer CEBS MasterCard® and / or Member Card® Financial services could use their existing processes to handle these types of transactions that are completed at one of their branch ATM's. For example, any credit union Member Card® can be used at any credit union ATM to perform a withdrawal or deposit or balance inquiry. Therefore, processes already exist to manage inter-credit union transactions.

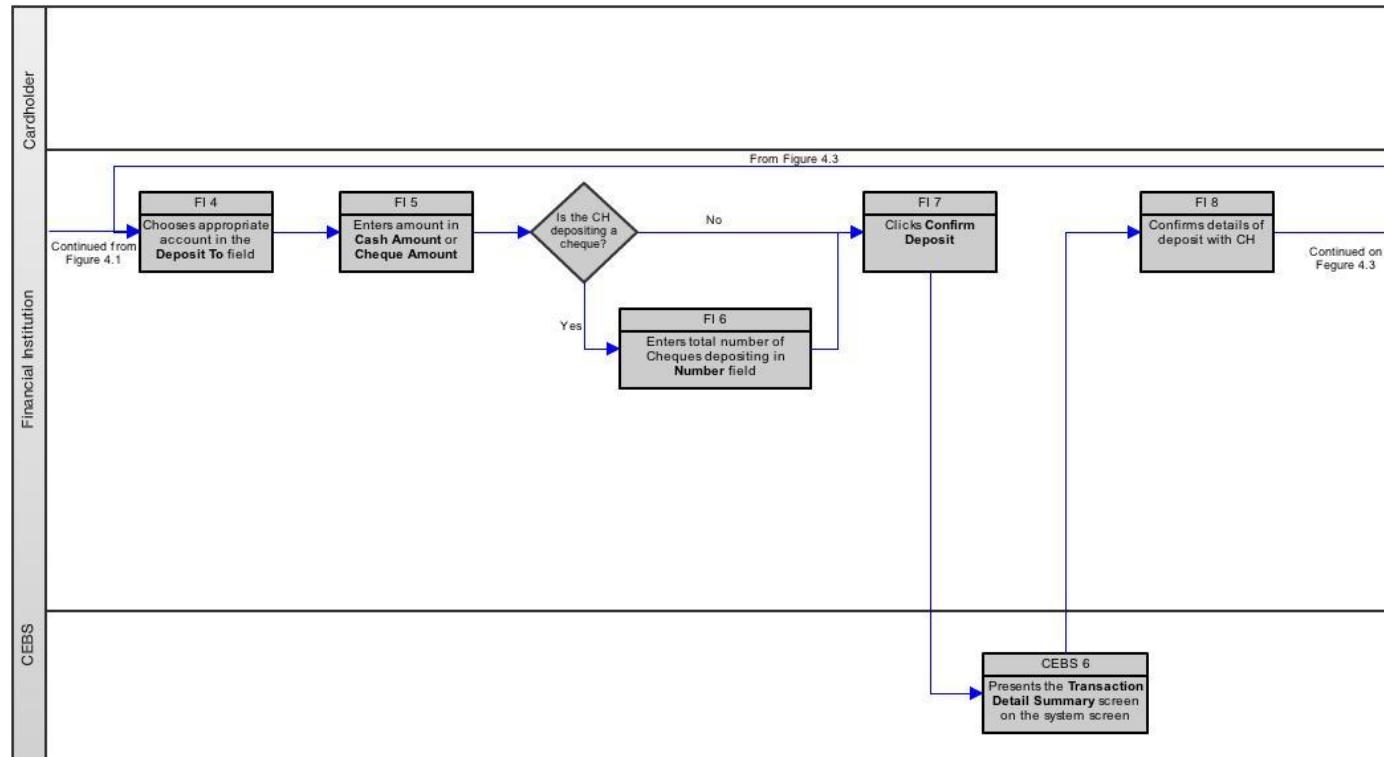
Figures 6.1 – 6.3 depict the process flow of a deposit using the CEBS Card Device. The process is similar for all transactions.

Figure 6.1 Applying a Magnetic Stripe Debit Card Deposit



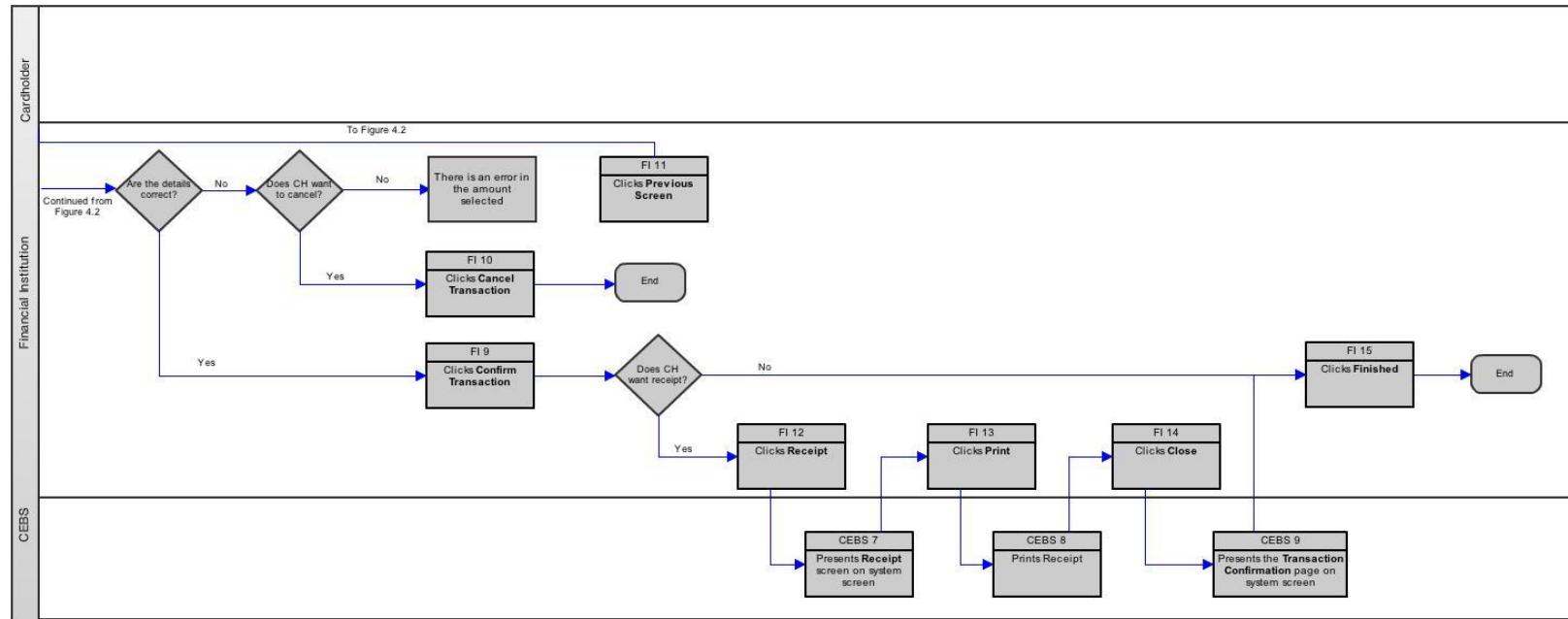
Source: CUETS Financial – CEBS Operational Support Manual

Figure 6.2 Applying a Magnetic Stripe Debit Card Deposit, Continued



Source: CUETS Financial – CEBS Operational Support Manual

Figure 6.3 Applying a Magnetic Stripe Debit Card Deposit, Continued



Source: CUETS Financial – CEBS Operational Support Manual

6.1 Gap Analysis

Shared Branching is a concept that First West Credit Union is looking to implement, and not an existing function that needs improvement. Therefore, the gap analysis looks at what gaps exist between the business requirements and the solution. A few gaps exist with the CEBS solution:

Not all desired transactions are supported

First West Credit Union would like to offer all of the transactions provided by CEBS with the addition of:

- Loan Payments
- Transfer between accounts

Transfers between accounts can be achieved by withdrawing funds from one account and depositing it to another account. Therefore, the only transaction that is missing is Loan Payments. However, as noted below, transfers between accounts cannot occur for all accounts the member owns.

Only members with Member Card® debit cards or MasterCard® cards can perform these transactions

Not all members have a debit card or a MasterCard®. Therefore, members who do not want a debit card will be unable to perform any of these transactions at a CEBS card device.

- At Envision Financial a total of 89,000 members do not have a Member Card®. That is slightly over 50% of their total membership base.
- At Valley First a total of 17,000 members do not have a Member Card®. That is roughly 36% of their total membership base.

Transactions are limited to accounts that are accessible from the debit card

When Member Card® debit cards are setup, a credit union member's Chequing and / or Savings accounts are attached to the debit card so that the member can access them when using the ATM or making a purchase at a store. When a card is used at the ATM, all accounts attached to the card are accessible. However, a restriction exists when using the CEBS Card Device. The restriction is that you can only access one Chequing account and one Savings account. Therefore, if a member has more than two

accounts linked to their debit card, they will be unable to access all of their accounts on the CEBS Card Device.

Member's debit card limits are used when performing transactions

When a debit card is issued, it is set up with limits to protect the member from fraudulent activity. Therefore, if a member has a daily limit of \$1,000, the member will only be able to withdraw up to \$1,000 when using the CEBS Card Device. However, if the member were to go into a branch, they would be able to withdraw as much as they wish. Limits are different for ATM transaction and Point-of-Sale (POS) transactions. Typical limits are \$600 for ATM transactions and \$2,500 for POS transactions. The CEBS card device will use the debit card POS limits.

6.2 Cost / Benefit Analysis

6.2.1 Costs

The CEBS solution does not require a high capital cost. Since it is a service and not a product, most of the costs associated with CEBS are recurring and variable. The solution relies on the CEBS Card Device and a network to allow the CEBS Card Device to communicate with CUETS' back-end transaction processing system. Both Envision Financial and Valley First already have the network infrastructure in place between their branches and CUETS. Therefore, the cost of setting up the CEBS solution is out of scope for this analysis since it is not relevant for either Envision Financial or Valley First.

CUETS has opted to lease the CEBS Card Devices instead of allowing credit unions to purchase them. Therefore, rather than a one-time fee to purchase the device, there is a monthly service fee for each CEBS Card Device and an additional per transaction fee. Table 6.1 provides a breakdown of the costs to implement this service.

Table 6.1 On-going Operational Costs

Description	Cost	Comment
CEBS Card Device Service Fee	\$45 / month: MasterCard® and Member Card® Services. \$35 / month: MasterCard® Service only. This fee is per device	Envision Financial and Valley First already have CEBS Card Devices in their branches with MasterCard® Services. Therefore, the cost to offer Member Card® Service would only be an additional \$10 per branch
Transaction Fee	\$1.50 per transaction	This fee is charged when a First West Credit Union cardholder uses his/her card at any participating credit union
Transaction Revenue	\$0.84 per transaction	This fee is paid to First West Credit Union when a transaction is performed using a CEBS card device at one of its branches.

Source: CUETS Financial – 2010 Schedule of Revenue and Fees

The monthly CEBS Card Device Service Fee will be as follows:

$$\begin{aligned}
 & \text{Envision Financial Branches (21) } \times \$10 + \text{Valley First Branches (16) } \times \$10 \\
 & = \$370 / \text{month} \times 12 \text{ months} \\
 & = \$4,440 / \text{year}
 \end{aligned}$$

With regard to transaction costs, if an Envision Financial card is used at a Valley First branch, the fee works out to be: $\$1.50 - \$0.84 = \$0.66$ since CUETS will charge Envision Financial \$1.50 for using its card at a participating credit union and pay Valley First for processing the transaction.

One of the gaps identified is that CUETS Chip cards can only be used with the CEBS Card Device. Interac has mandated that all credit unions in BC migrate all Magnetic Stripe cards to Chip cards by December 31, 2012. With this mandate in place, many credit unions are already starting to replace their Magnetic Stripe cards with Chip Cards. Envision Financial will be issuing CUETS-produced Chip Member Card® debit cards. However, Valley First does not use CUETS. Therefore, in order for Valley First to become a participating credit union, they will have to change their current Member Card® debit card supplier to CUETS. There are several costs associated with changing card suppliers:

1. Chip Card Production.

Table 6.2 breaks down the costs CUETS charges to produce a Chip Member Card®.

2. Changes to the banking system to work with CUETS card ordering system.

When a credit union wants to order new cards (or replace expiring cards), a card order file needs to be sent to CUETS. This file must conform to the file format specified by CUETS. Analysis of what changes need to be made to the Valley First banking system to support CUETS has not been done and is out of scope for this paper. However, the following activities *may* need to be undertaken in order for the banking system to support CUETS card ordering:

- Software Development
 - Need to develop a program to create the CUETS card order file, which is submitted to CUETS to produce cards. There is a specific File Format supplied by CUETS to which the program must conform.
 - May need to modify the existing banking system to include fields that are mandatory for CUETS Card products and remove extraneous fields.
- Quality Assurance (QA) Testing
 - The QA team will have to test any development that is completed.
- Operational Process Changes
 - A software program will create the card order file automatically. The output of the program is the card order file, and this needs to be submitted to CUETS. In order to minimize the amount of manual intervention, a process needs to be implemented to automatically upload the card order file to CUETS once it has been generated.
- Staff Training
 - There will most likely be changes to how the banking system works when ordering cards. Branch personnel will need to be trained prior to these changes being implemented.

First Calgary Savings recently switched to CUETS and the total cost for that project was roughly \$350,000. This cost includes all inUnison resources to develop and test the changes, card production, and vendor support. The majority of the costs were

associated with producing new cards. Therefore, we will use this cost as a baseline to estimate how much it would cost Valley First to convert its MemberCards to CUETS-produced cards.

Table 6.2 CHIP Card Production Costs

Description	Cost
Card Plastic	\$0.17 / Card
Chip Installation / Manufacturing Fee	\$1.38 / Card
Base Chip Card Fee - Includes applying credit union custom design, embossing, and delivery to member	\$1.41 / Card
PIN Generation and PIN Mailer (for new cards only)	\$0.78 / Card
Total for new Chip Card	\$3.74 / Card
Total for reordered Chip Card	\$2.96 / Card

Source: CUETS Financial – 2010 Schedule of Revenue and Fees

6.2.2 Benefits

While most business papers separate benefits by describing the tangible vs. intangible benefits, we believe it makes more sense to separate the benefits by member-gained and business-gained.

Member Gained Benefits

Members will receive few important benefits if the CUETS solution is implemented. The most important benefit is that transactions will occur in real time. This means that if a member walks into a branch and asks to deposit money into their account, the funds will appear in the account instantaneously and the member will have access to those funds immediately.

For members that own debit and/or credit cards, this service will not change. They will continue to swipe their card and enter their PIN. Therefore, from the members' point of view, there are no additional complexities involved in processing debit or credit card transactions using the CUETS solution.

Business Gained Benefits

The most important reason for implementing the CUETS service is to offer flexibility to members when they want to bank at different locations. Therefore, the benefits for the business will not be additional cost and/or time savings on current processes as this is a new service that will be offered to members. New service means new costs, and new business processes. However, some benefits will accrue from using this solution when compared to others.

The first benefit is that the costs are quite low. Both Envision and Valley First currently use CEBS for MasterCard. They would only need to pay an additional \$10 per branch per month to enable CEBS for MemberCards®. Furthermore, First West Credit Union executives do not believe there will be a high volume of inter-regional branch transactions, and therefore, the overall costs should be comparatively low. Another benefit is the ease of use for branch staff. The system consists of two parts – the CEBS device and an online web page that is connected to the device. Therefore, staff training should be minimal.

6.3 Risk Analysis

CUETS can increase the fees at any time

The documentation provided by CUETS notes that the CEBS device licensing fees and/or the transaction fees can change at any time. While an increase to the CEBS device fees would not have much of an impact, increases to transaction fees could have serious impacts if high volumes of Inter-Regional branch transactions are processed.

Inability to extend services

If First West Credit Union desires any customization, it will have to be submitted to CUETS to be done, which may incur a cost. However, past experiences with CUETS indicates that they do not do any customizations for individual credit unions. Rather, they *may* add the required functionality to their solution, which can take several months to be implemented.

Fraudulent Activities

The onus is on the teller performing the transaction to verify that the cardholder is the owner of the card. This is usually accomplished by checking for valid government issued ID. However, if the teller does not follow this process, there is the potential for fraudulent transactions to be processed on a skimmed card.

Open to all participating Credit Unions

Another risk is that this service is available to all participating credit unions and cannot be restricted. Therefore, First West Credit Union cardholders will be able to use their cards and perform transactions at any credit union in Canada that has subscribed to CEBS. This can potentially be a benefit as it expands the number of locations First West Credit Union cardholders can visit; however, the requirement specified is that transactions should only be allowed between Valley First and Envision Financial. First West Credit Union can restrict which cards they accept, but not the other way around.

6.4 Resource Analysis

The resource usage can be broken down into two categories:

1. Implementation
2. Changes to support CUETS Card Production

Few resources will be required to support the Implementation for either Envision Financial or Valley First. If either credit union did not have the networking infrastructure in place, then more resources would be required. However, this analysis is out of scope for this paper as it is not required for either institution. The only resources required are the branch tellers that will be performing these transactions, the credit union accounting department, and a Business Analyst to identify how business processes will need to be changed to include CEBS as part of daily operation. The tellers will have to learn how to operate the CEBS card devices, either by reviewing the manual or by having someone come in and teach them how to use it. The accounting department will need to understand the changes that are made to its settlement process to support CEBS transactions.

Since Envision Financial already uses CUETS as its card supplier, resources to make changes to support CUETS are not applicable. As noted in the Cost Analysis

section, three different resource types *may* be required: Development, QA, and Operations. This does not imply on-going resource consumption; rather, resources would only be required until development and testing work is completed. Until an analysis of the change requirements to support CUETS is completed, a timeline of how long these resources would be needed for this project cannot be given.

6.5 Implementation

As mentioned previously, the CEBS solution is a service and not a product, and consequently, to implement this service, a credit union only needs to do two things:

1. Setup the networking infrastructure for its branches to be able to communicate with CUETS back-end transaction processing system. Collaboration with CUETS is necessary; however, this step is irrelevant for both Envision and Valley First as this is already in place.
2. Sign up for the CEBS Service and receive a CEBS card device for each of your branches

As previously mentioned, both Envision Financial and Valley First have already signed up for the MasterCard® CEBS Service. All they have to do is contact CUETS and turn on the Member Card® CEBS Service. An additional component is the need to train the branch tellers so they are able to perform transactions using the CEBS Card Devices. CUETS provides a manual that gives step-by-step procedures for performing all of the transactions it supports. However, as previously mentioned, only CUETS-produced CHIP cards will work with the CEBS service. Therefore, while the current Valley First magnetic stripe cards will function with the CEBS service, once they convert to chip cards, they will need to use CUETS as its card supplier. Therefore, the implementation has low complexity and should take minimal time to get up and running.

6.6 Business Alignment

Cost

The cost analysis detailed the costs associated with the CEBS solution. This solution is very cost effective since both Envision and Valley First already use CEBS for MasterCard. Furthermore, the \$1.50 transaction fee that will be charged to the credit

union is a net fee of \$0.66 to First West Credit Union. The reason for this is that the credit union that processes the transaction will get \$0.84, and the member's credit union will be charged \$1.50. The new sum is \$1.50 - \$0.84, which is a total fee of \$0.66. Again, there are no capital costs for First West Credit Union until Valley First converts magnetic stripe cards to chip cards, which must occur by 2012. At this time, there will be a substantial cost to convert to CUETS.

Proven solution

CUETS Financial is part of a company with high standards and has been providing card production and MasterCard® products to credit unions across Canada for many years. The CEBS Solution was developed to assist with the Chip Card PIN changes. There are currently 240 credit unions in Canada using CEBS MemberCard® services, 15 of which are from BC. Based on this extend of usage, it is evidence that CEBS is a proven solution that has already processed extensive transactions. Furthermore, CUETS has informed us that every month, the number of credit unions choosing MemberCard® services is growing. This is because, in 2009, many credit unions decided to wait for MemberCard® Chip issuance to begin prior to adding CEBS MemberCard® services to their suite of CEBS Services. With the conversions to chip enabled MemberCards® occurring now, many credit unions are adding these services.

Reliability

As mentioned above, CUETS has relationships with many credit unions in Canada, which indicates that their service is of high quality. Like all software, this solution may have some unexpected errors or flaws; however, CUETS has a reputation for providing excellent customer support, especially with critical production issues. CUETS provides 24/7 customer service. If any issues arise, they can be investigated by CUETS immediately.

Scalable to support future mergers

The CEBS solution is somewhat scalable to support future First West Credit Union mergers. This degree of scalability will depend on two factors:

1. Does the new credit union already use CEBS devices for either MasterCard or MemberCard® products?

2. Does the new credit union use CUETS to produce its MemberCard® CHIP products?

If the answer to both questions is yes, then this credit union can already process Inter-Regional Branch transactions. If the answer to the first question is no, then it is simply a matter of signing up for the CEBS solution, installing it in the branches, and setting up the networking so the CEBS card devices can communicate with CUETS backend transaction processing system. However, if CUETS does not produce cards for the new credit union, then additional work is necessary to convert their cards to CUETS produced cards. However, the amount of work required to convert cards is not significant.

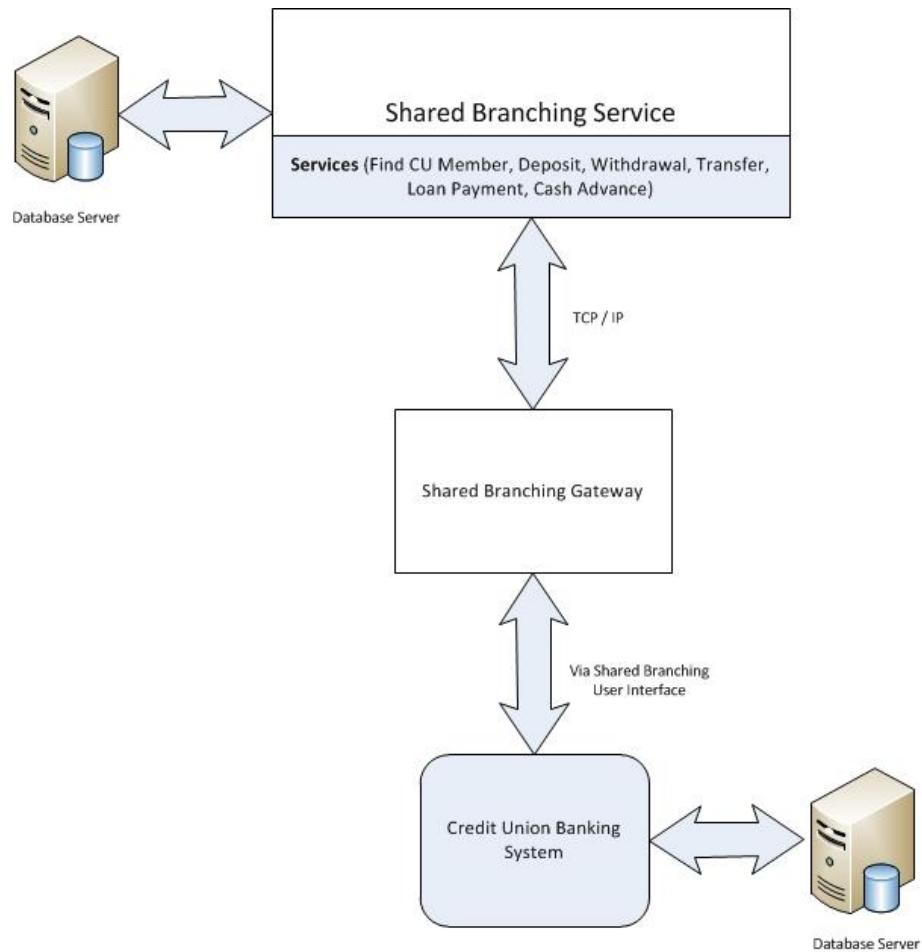
CEBS offers First West Credit Union a solution that could be in place in a short amount of time. The costs are extremely low and the implementation is very simple. The CEBS solution currently works with any regular Magnetic Stripe member debit card; however, for new chip cards, only CUETS-issued chip cards will work with the CEBS devices. Valley First does not use CUETS for member card production; therefore, once Valley First begins to issue chip cards, CEBS will not work for Valley First members. Valley First's timeline for issuing chip cards will play a big role in deciding whether this solution should be implemented.

7: Internal Development

inUnison Technology Services has the resources necessary to design and develop a solution that would enable First West Credit Union to provide inter-regional banking services to their members. A detailed design of how the solution will function has not been completed as this is out of scope for this paper. However, some consideration has been given to how such a solution could work so that estimates can be derived for the purpose of determining the feasibility of developing a solution internally.

The solution would be designed such that it would be able to support any banking platform so that any credit union can partner with First West Credit Union and still be able to offer inter-regional banking services. There would be two major pieces to the solution, as described in Figure 7.1

Figure 7.1 Internal Development Solution Overview



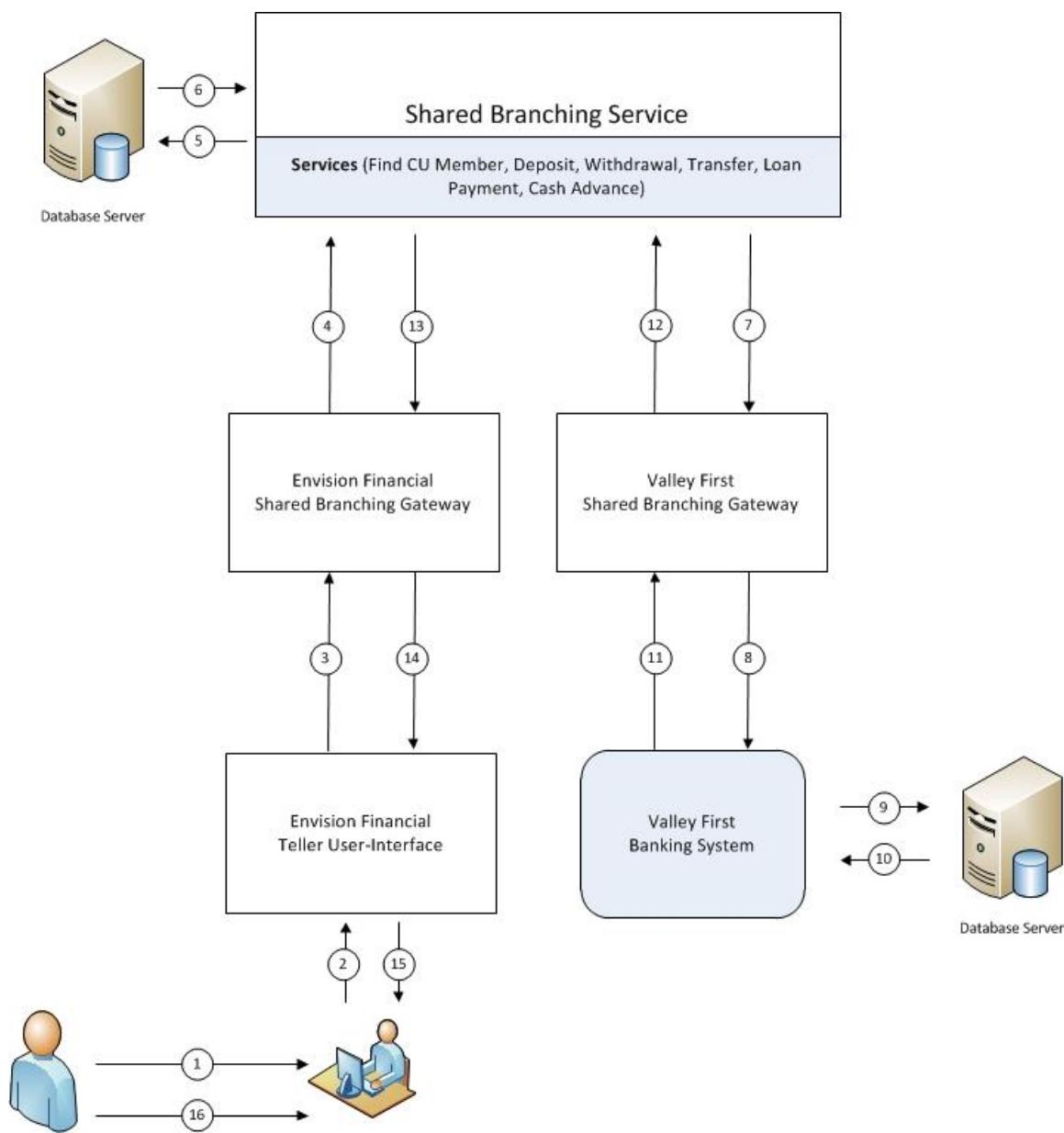
Source: created by authors

The Shared Branching Service will follow ISO 8583, the accepted standard for financial transaction processing. The idea is to provide a messaging platform so that any credit union can interface with the service to conduct financial transactions.

The Shared Branching Gateway will be credit union specific and follow the ISO 8583 standard so it is able to communicate with the Shared Branching Service. This Gateway will be the intermediary between the banking system and the Shared Branching Service.

Figure 7.2 and Table 7.1 provide an overview of how Envision and Valley First members would perform a deposit at a credit union where they are not members.

Figure 7.2 Performing a Deposit in branch



Source: created by authors

Table 7.1 Performing a Deposit in branch

Step	Detail
1	Member requests to deposit cheque / cash into his account at Valley First
2	Teller logs on to the User Interface (UI) and attempts to retrieve the member's financial information
3	The UI will send the request to the Envision Financial Shared Branching Gateway (SBG) to process the request
4	The Envision Financial SBG will send the request to the Shared Branching Service (SBS) to process the request
5	The SBS will look up the source credit union and the destination credit union from the request message by checking with the SBS Database Server
6	The SBS Database Server will return which credit union the request should be sent to. In this case, it will be sent to Valley First
7	The SBS will forward the request to the Valley First SBG
8	The Valley First SBG will send the request to the Valley First Banking System to process the transaction
9	The Valley First Banking System will send the transaction to the Valley First Database Server to update the member's financial information
10	The Valley First Database Server will reply with a success or failure
11	The Valley First Banking System will reply with a success or failure
12	The Valley First SBG will forward the reply to the SBS
13	The SBS will forward the reply to the Envision Financial SBG
14	The Envision Financial SBG will forward the reply to the Envision Financial Teller UI
15	The teller will be notified of the response and inform the member.
16	If the response was successful, the member will give the teller the cash / cheque. If the response was failure, then they can repeat these steps to try again.
Note:	The teller will follow the same process they do today when deposits to other credit unions are processed.

Source: created by authors

7.1 Gap Analysis

Since the solution described in this section will be developed internally, it has been determined that all functional requirements can be met through customized development. In the future, if new credit unions partner with First West Credit Union, one gap that may exist is that the new parent's banking system may not be customizable. If this is the case, the Shared Branching Gateway that needs to be developed for the credit

union must find an alternative way to update the banking system to process the transactions.

7.2 Cost / Benefit Analysis

7.2.1 Costs

The costs have been detailed in two sections: Shared Branching Service and Shared Branching Gateway.

Shared Branching Service

The bulk of the costs will be from designing and developing the Shared Branching Service. This Service is very complex, as it needs to be able to relay different transaction requests from one credit union to another. Furthermore, it must be able to perform multiple requests simultaneously. The costs have been estimated based on the resource analysis presented in section 7.4 and the current salary bands paid by inUnison Technology Services. We have estimated that the project should take no longer than 12 months to complete with the resources detailed in table 7.9. We have assumed that 12 months is equivalent to 260 business days, taking into account weekends and holidays. Table 7.2 provides a breakdown of how much each resource will cost over the life of the project.

Table 7.2 Shared Branching Service – Resource Costs

Resource	Rate / Day	Day's Needed	Total Cost
Sr. Project Manager	\$360	210 (80% utilization)	\$ 75,600
Business Analyst	\$320	105 (40% utilization)	\$ 33,600
Sr. Quality Assurance Analyst	\$290	105 (40% utilization)	\$ 30,450
Intermediate Quality Assurance Analyst	\$260	80 (30% utilization)	\$ 20,800
Intermediate Quality Assurance Analyst	\$260	80 (30% utilization)	\$ 20,800
Sr. Developer	\$360	210 (80% utilization)	\$ 75,600
Sr. Developer	\$360	210 (80% utilization)	\$ 75,600
Sr. Developer	\$360	210 (80% utilization)	\$ 75,600
Sr. Technical Architect	\$360	105 (40% utilization)	\$ 37,800
Sr. Infrastructure Engineer	\$360	105 (40% utilization)	\$ 37,800
TOTAL			\$ 483,650

Source: created by authors with data from inUnison

Once the Shared Branching Service has been developed, there are several costs associated with the implementation. A detailed explanation of how the service will be implemented is provided in section 7.5. The implementation costs have been identified in Table 7.3.

Table 7.3 Shared Branching Service – Implementation Costs

Description	Cost
2 New Server's	\$ 30, 000
TELUS Resources	\$ 45, 000
TOTAL	\$ 75, 000

Source: created by authors

In addition to the resource and implementation costs, there are recurring costs associated with the maintenance of this service. On-going operational costs will handle issues that are reported by members and/or credit union staff, and will be incurred when First West credit union requires additional functionality. Table 7.4 provides a breakdown of these costs.

Table 7.4 Shared Branching Service – On-going Operational Costs

Description	Amount	Frequency	Total Cost / Year
Server Maintenance	\$ 250	Month	\$ 3, 000
Intermediate Developer	\$65, 000	5% utilization	\$ 3, 250
Support Analyst	\$50, 000	5% utilization	\$ 2, 500
TOTAL			\$ 8, 750

Source: created by authors with data from inUnison

Table 7.2 – Table 7.4 provide an overview of the capital and recurring costs associated with developing and operating the Shared Branching Service. The total costs to develop and implement this service will be \$558,650, assuming the project will be completed within 12 months using the resources detailed above. Lastly, the annual support and maintenance costs to operate this service are a mere \$8,750. This estimate is based on the average time a Support Analyst spends on any particular system at Envision Financial, other than the banking system.

Shared Branching Gateway

As mentioned above, the Shared Branching Gateway will connect the banking system to the Shared Branching Service and allow tellers to perform transactions for members at other credit unions. The Shared Branching Gateway is comprised of two parts:

1. A front-end user interface (UI) for the credit union tellers to perform the transaction
2. The gateway application to relay the message from the UI to the Shared Branching Service and vice versa.

The cost estimates are structured the same as they were for the Shared Branching Service, and therefore, a detailed analysis of the resources and implementation cost are provided in the appropriate sections below. We have estimated that the project should take no longer than four months to complete with the resources detailed in section 7.4. We have assumed that four months is equivalent to 90 business days, taking into account weekends and holidays. Table 7.5 provides a breakdown of the cost for each resource.

Table 7.5 Shared Branching Gateway – Resource Costs

Resource	Rate / Day	Day's Needed	Total Cost
Sr. Project Manager	\$360	70 (80% utilization)	\$ 25,200
Business Analyst	\$320	55 (60% utilization)	\$ 17,600
Sr. Quality Assurance Analyst	\$290	65 (70% utilization)	\$ 18,850
Intermediate Quality Assurance Analyst	\$260	45 (50% utilization)	\$ 11,700
Intermediate Quality Assurance Analyst	\$260	45 (50% utilization)	\$ 11,700
Sr. Developer	\$360	70 (80% utilization)	\$ 25,200
Sr. Developer	\$360	70 (80% utilization)	\$ 25,200
Sr. Technical Architect	\$360	35 (40% utilization)	\$ 12,600
Sr. Infrastructure Engineer	\$360	35 (40% utilization)	\$ 12,600
TOTAL			\$ 160,650

Source: created by authors with data from inUnison

Similar to the Shared Branching Service, once the Shared Branching Gateway has been developed, there are several costs associated with the implementation, and a

detailed explanation of how the service will be implemented is provided in section 7.5.

The implementation costs have been identified in Table 7.6.

Table 7.6 Shared Branching Gateway – Implementation Costs

Description	Cost
2 New Server's	\$ 15,000
TELUS Resources	\$ 10,000
TOTAL	\$ 25,000

Source: created by authors

Again, there will be recurring costs associated with the maintenance of the UI and the Gateway. On-going operational costs will handle issues that are reported by members and/or credit union staff, and when First West Credit Union requires additional functionality. There is an opportunity to try to synergize the resources required for operational costs for all credit unions and for the Shared Branching Service. Table 7.7 provides a breakdown of these costs.

Table 7.7 Shared Branching Gateway – On-going Operational Costs

Description	Amount	Frequency	Total Cost / Year
Server Maintenance	\$ 250	Month	\$ 3,000
Intermediate Developer	\$65,000	5% utilization	\$ 3,250
Support Analyst	\$50,000	5% utilization	\$ 2,500
TOTAL			\$ 8,750

Source: created by authors

Table 7.5 – Table 7.7 provide an overview of the capital and recurring costs associated with developing and operating the Shared Branching Gateway. The total cost to develop and implement this Gateway will be roughly \$185,650, assuming the project will be completed within four months using the resources detailed above. This cost will be per credit union, so the total development cost for both Envision and Valley First will be \$371,300. Lastly, the yearly support and maintenance costs to operate this service are only \$8,750, the same as the support and maintenance costs for the Shared Branching Service.

7.2.2 Benefits

Developing a solution in-house means starting from the bottom up and spending the time and resources necessary to do this. There are no third party solutions that are sufficiently flexible to permit the customization required to align with the business needs. While this project may be lengthy and will tie up personnel resources such that they are unable to work on other high priority projects, the single most important benefit of this solution is that it provides the flexibility required to meet all business needs. In Chapter 3, we have identified the business requirements, and through discussions with some senior developers, we know that it is possible to meet the requirements using internal resources.

Another advantage of going this route is that this solution is not dependant on the banking system that the credit union runs, nor is it dependant on any of the existing banking system processes, such as card producers (for example, the CUETS solution). The solution would be developed in such a way that the Shared Branching Gateway will be credit union specific and still be able to communicate with the Shared Branching Service.

The ability to offer additional services in the future will not be as difficult as it would be if a product or solution were purchased from a third party vendor. Since inUnison will be developing the service, it will own the application source code. Enhancements will be developed internally to support the desired functionality.

7.3 Risk Analysis

Too costly and/or time consuming

Once further investigation is completed to determine the best way to design the solution, it may be determined that the project will require much more effort and resources than initially anticipated. This would increase costs and possibly the length of the project, depending on how many resources can be assigned to the project, and the time spent investigating would end up being wasted resources.

Depreciated Quality

Frequently development is rushed when projects start to push the timeline, and testing is either rushed or cutback. This can have major impacts on the stability of the

service, causing frustration amongst staff and members if the service does not function as expected. Furthermore, additional time will need to be required to fix the outstanding issues to ensure the service works as expected.

Over Budget

As with any IT project in general, the risk of going over budget or not completing on time is high. An article by Frank Schmidt references four prominent research firms when saying that only one out of every five IT projects complete on schedule. If the budget or the timeline begins to slip, there is a chance that the project will be put on hold until a review has been completed to assess viability and determine a new completion date. This is the normal process when a project begins to slip at inUnison. Lastly, it is not rare to keep a project on hold for many months and even cancel it all together.

Scope Creep

During the life of the project, it is very likely that First West Credit Union will develop new requirements for this service and will want to include these requirements in the first phase. This scope creep will definitely delay the completion date and use up additional resources.

7.4 Resource Analysis

As mentioned above, inUnison employs enough of the right resources to complete this project internally. The assumption is that the required resources would be available to work on this project, and therefore, no additional consultants would be required to assist with the development. Table 7.8 provides an overview of the resources inUnison employs that are relevant to this project.

Table 7.8 inUnison Resources

Role	Level	Number
Banking System Architect	Senior	1
Banking Developer	Senior Intermediate	5 1
Non-Banking System Architect	Senior	1
Non-Banking Developer	Senior Intermediate Junior	4 1 1
Banking Business Analyst	Intermediate	3
Non-Banking Business Analyst	Senior Intermediate	1 1
Infrastructure Engineer	Senior	3
Project Manager	Senior Intermediate	2 1
Quality Assurance Analyst	Senior Intermediate	2 4

Source: created by authors with data from inUnison

Since the solution calls for two separate components, Shared Branching Service and Shared Branching Gateway, the resource analysis has been separated into two project teams. The first team will develop the Shared Branching Service, and table 7.9 describes the required resources.

The second project team will develop the Shared Branching Gateway and the User Interface. This development cannot start until the specifications for the Shared Branching Service has been finalized. Table 7.10 describes the required resources.

Our resource analysis shows that the required resources are very similar for both projects. The main difference is the specialization of the resources – banking vs. non-Banking. inUnison is owned by First West Credit Union and First Calgary Savings Credit Union and share specialized resources. The resources that can provide technology services for the banking platform and the systems that are not part of the banking platform have special knowledge of the financial services industry and the banking platform used by both Envision Financial and First Calgary Savings. These resources have a banking specialization, while the non-banking resources have skills that could be used in almost any industry.

Table 7.9 Shared Branching Service – Required Resources

Resource	# Required / Level	Responsibility
Project Manager	1 / Senior	<ul style="list-style-type: none"> - Oversee the project development progress - Coordinate resources and manage potential risks
Business analysts – Non-Banking	1 / Intermediate	<ul style="list-style-type: none"> - Work with Technical Architect and Project Manager to develop the business requirement documents to be used by developer
Quality Assurance	1 / Senior 1 / Intermediate	<ul style="list-style-type: none"> - Develop test plans to test new service - Test new service to ensure all requirements have been met. - Ensure new service passes quality levels
Developer – Non-Banking	2 / Senior	<ul style="list-style-type: none"> - Develop and manage the development plan / schedule - Develop the Shared Branching Service
Technical Architect – Non-Banking	1 / Senior	<ul style="list-style-type: none"> - Work with Infrastructure Engineer to design the Shared Branching Service - Work with Developers to ensure that development meets the expected coding standards
Infrastructure Engineer	1 / Senior	<ul style="list-style-type: none"> - Work with Technical Architect to design the Shared Branching Service - Ensure all activities are identified for implementation and operation.

Source: created by authors

Table 7.10 Shared Branching Gateway – Required Resources

Resource	# Required / Level	Responsibility
Project Manager	1 / Senior	<ul style="list-style-type: none"> - Oversee the project development progress - Coordinate resources and manage potential risks
Business analysts – Banking	1 / Intermediate	<ul style="list-style-type: none"> - Work with the credit union to ensure all business requirements have been captured and met. - Understand how the settlement process will work and understand how the cash flow will work (if someone deposits / withdrawals from Valley First, how does the cash get to Envision?) - Understand how the User Interface will work for staff
Quality Assurance	1 / Senior 2 / Intermediate	<ul style="list-style-type: none"> - Develop test plans to test the Shared Branching Gateway and the User Interface - Thoroughly test the solution from end-to-end to ensure all requirements have been met. - Ensure new service passes quality levels as established by the QA team
Developer – Banking	2 / Senior	<ul style="list-style-type: none"> - Develop and manage the development plan / schedule - Develop the Shared Branching Gateway - Develop the User Interface
Technical Architect – Banking	1 / Senior	<ul style="list-style-type: none"> - Work with Infrastructure Engineer to design the Shared Branching Gateway and User Interface - Work with Developers to ensure development meets the expected coding standards
Infrastructure Engineer	1 / Senior	<ul style="list-style-type: none"> - Work with Technical Architect to design Shared Branching Gateway - Ensures all activities are identified for implementation and operation.

Source: created by authors

7.5 Implementation

A detailed plan of how these projects could be implemented is out of scope for this paper as this can only be done once the solution has been designed in its entirety. However, we have provided a high-level implementation plan for the solution described above.

The first stage is to select a project team that will work on developing the Shared Branching Service. Once the technical specifications have been developed, the Shared Branching Gateway project team can start development. Depending on the available resources and timelines, there may need to be a single project team for each credit union to develop the Shared Branching Gateway. Since a minimum of two credit unions would be required to interface with the Shared Branching Service to perform any testing, it makes sense for the Shared Branching Gateway project team to include enough resources to develop the Gateways in conjunction with each other.

Once the development and testing is complete, the Shared Branching Service and Shared Branching Gateway will need to be installed into the production environment. Envision contracts out most of its computer hosting and support to TELUS. A decision will need to be made with regard to where the Service and Gateway will be hosted. 24 / 7 support is not necessary for this service, as it will only be used during regular branch hours. inUnison currently has a data centre that has the ability to host both the Service and the Gateway. If inUnison decides to contract out the hosting to TELUS, there will be additional cost implications for managing and maintaining additional servers.

In the cost analysis, we identified that the Shared Branching Service and the Shared Branching Gateway will each require two physical servers. The reason for this is that either the Shared Branching Service or the Shared Branching Gateway will require a production server and a backup server as contingency to ensure downtime will be minimal.

The last step is to install the User Interface application that the tellers will use at all branch locations, along with staff training to ensure they understand how to process transactions.

7.6 Business Alignment

As with all previous solutions we have analysed, this section will highlight some of the important factors that First West Credit Union will use when deciding which solution to choose.

Cost

Compared to some of the other solutions, the costs for internal development are not very high. However, these costs are based on high-level estimates that can change drastically if a different architecture is used to develop the solution. Even if the costs increase, the majority of the costs will be the development of the Shared Branching Service. Once this is in production, the cost to add a new credit union partner is associated with the development of the Shared Branching Gateway for that credit union. The cost analysis shows that the operational costs are minimal and should not have impact the overall budget.

Proven solution

As with any new venture, there are several associated risks, which have been identified in the risk analysis section. Therefore, this is not a proven solution, as it involves a new development not previously undertaken. There will likely be a period of stabilization in which all the kinks are worked out. If there are significant problems with the service, or if there are issues that take longer than expected to resolve, members may not trust the service and discontinue using it. Therefore, it is very important to have the solution fully tested prior to releasing to production.

Reliability

There are several reasons why this solution will prove to be very reliable. First, since internal resources will maintain the service, issues will be resolved within the agreed upon Service Level Agreements (SLA). Therefore, if there are critical production issues, these should be resolved within a couple of days at most. There will be a period of stabilization in which both the credit union staff and the members may experience some issues, but once this period is over, the service should be very reliable.

Scalable to support future mergers

The solution has been designed in such a way that it will be very easy to add additional credit union partners. The Shared Branching Service will be conform to the ISO 8583 standard. This means that any partner that joins First West will be able to develop a Shared Branching Gateway to communicate with the Shared Branching Service no matter what platform its current banking system is on. The Shared Branching Gateway will be written to communicate with both the Shared Branching Service and the credit union banking system. Therefore, the only development necessary when a new credit union partner joins is to develop the Shared Branching Gateway.

inUnison has the capability to develop a solution internally; however, inUnison has to evaluate the risks for engaging a large portion of its resources in such a lengthy project because inUnison needs to allocate its resource to support business operation and work on other business priorities. While the costs may be high, a custom solution developed in house can address all requirements, and First West will have the internal capability to accommodate additional credit union partners in the future.

8: Recommendations

In Chapter 4 – Chapter 7, we presented four possible solutions: Banking Conversion, Central 1 Customized Solution, CUETS Enhanced Branch Services (CEBS), and Internal Development Solution. We have used various tools and frameworks to help us analyse these solutions, and in this chapter, we will present a summary of the differences between each of the solutions and provide our recommendation to First West Credit Union with regard to which solution best meets the business needs.

8.1 An Overview of Solution Analysis

The purpose of this paper is to define what Shared Branching means to First West Credit Union, understand what First West is trying to achieve by implementing such a solution, and researching and analysing various solutions that could be implemented by First West.

Table 8.1 provides a side-by-side summary of the tools and frameworks used to analyse each of the solutions. For each solution, this table presents a gap comparison, the high or low cost implications, the benefits gained when choosing each solution, the level of risk associated with each solution, the amount of external and internal resources required to implement, the implementation details and complexity, and the alignment with the business requirements.

Table 8.1 Summary of Solution Analysis

	Banking Conversion	Interface Provided by Third Party		Interface Developed In House
		Central 1 Solution	CUETS Solution	
Gap Analysis	None	No existing product No credit card cash advances Internet Banking scope change	No loan payments Card limits are enforced Only applicable to CUETS produced debit cards Can only access accounts linked to card	None
Cost Analysis (Capital / Operational)	\$5.5 Million N/A	\$495,120 \$156,000	\$0 \$4,440 + \$1.50 per transaction To Convert to CUETS Cards: \$3.74 per card Assuming 40,000 cards: \$250,000	\$929,950 \$ 26,250
Benefit Analysis	Single banking system Increased Business Intelligence Integration of technology support and maintenance	Real-Time transactions Already subscribe to Central 1 services Operation, support, and training	Real-Time transactions Easy to use for both members and staff Already using CEBS in branches	All business needs met Easy to extend functionality Independent of Credit Union banking system platform
Risk Analysis	High Complexity High Capital Expenditure High Member Impact	Customized solution can mean high costs and unanticipated issues Potential impact to current Internet Banking system Conflict with Central 1's future shared branch product	Fees can be increased at anytime Possibility of fraud Difficult to extend services	Costly and time consuming Over budget Potential depreciated quality Scope Creep
Resources	Large Internal and External project teams	Big External and Medium sized Internal project teams	Small Internal and External project teams	Large Internal project teams
Implementation	12 – 18 months Very complex Involves all areas of the organization	Majority completed by Central 1 Internal team to integrate into existing Internet Banking system Length of project highly dependent on Central 1 resources	Mostly around testing functionality Turning on services as some CEBS services already in use	6 – 8 months Can be complex Two projects being developed concurrently
Alignment	Too Expensive Very Proven Reliable Not Scalable	Within average costs Proven Reliable Very Scalable	Very Low Costs Proven Very Reliable Scalable	Low Costs Unproven Reliable Very Scalable

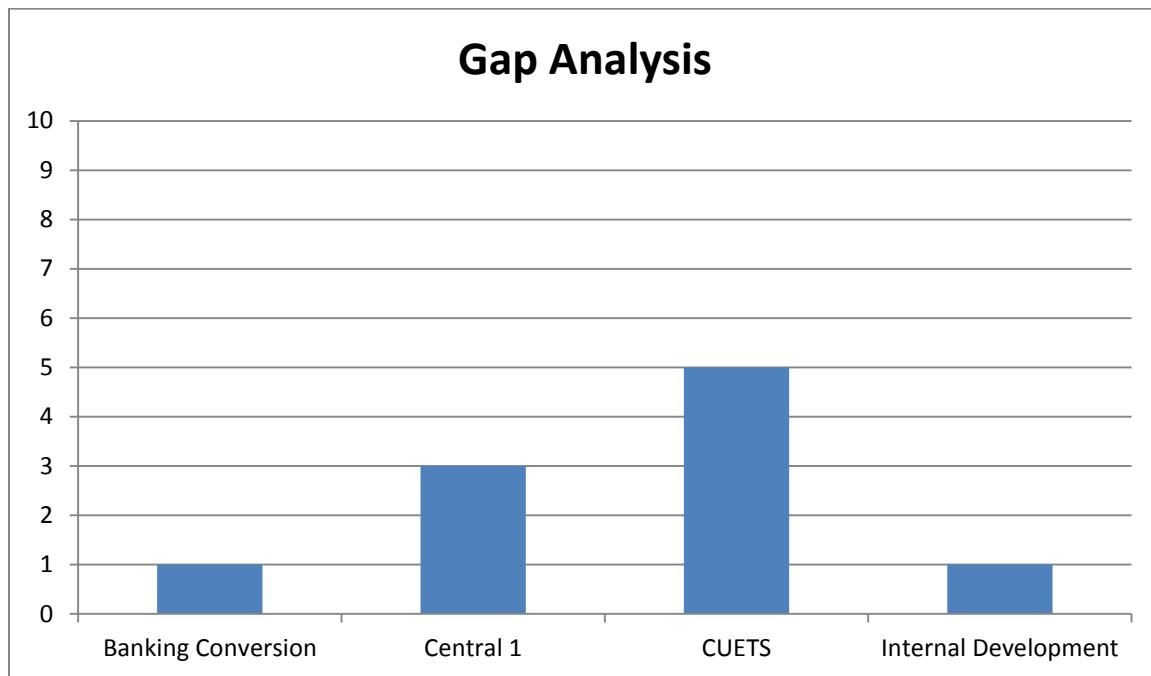
Source: created by authors

8.2 Ranking of Solutions

In this section, we will compare and rank the four proposed solution on a 10-point scale. This is a critical component in order to support the recommendations. Since most of the tools we have used provide quantitative and not qualitative data, we have collectively ranked each of the solutions on a scale between 1 to 10 for each of the tools / frameworks we used, because we believe it will correctly represent the relative strengths of each option. One is the lowest ranking a solution can be assigned and ten is the highest. Depending on the tool / framework, a low ranking can be either good or bad. For example, a low ranking on the Gap Analysis means that there are not many gaps, which is a positive; however, a low ranking on the Benefit Analysis means that this solution does not provide many benefits, which is a negative. We used a 10-point scale to provide First West Credit Union executives an indication of the benefits and drawbacks of each solution. The authors completed the rankings collectively.

Figures 8.1 – 8.7 chart out each of the tools / frameworks with the rankings for each solution. We will describe each figure and point out the reasons the rankings were assigned and what this means to our overall analysis.

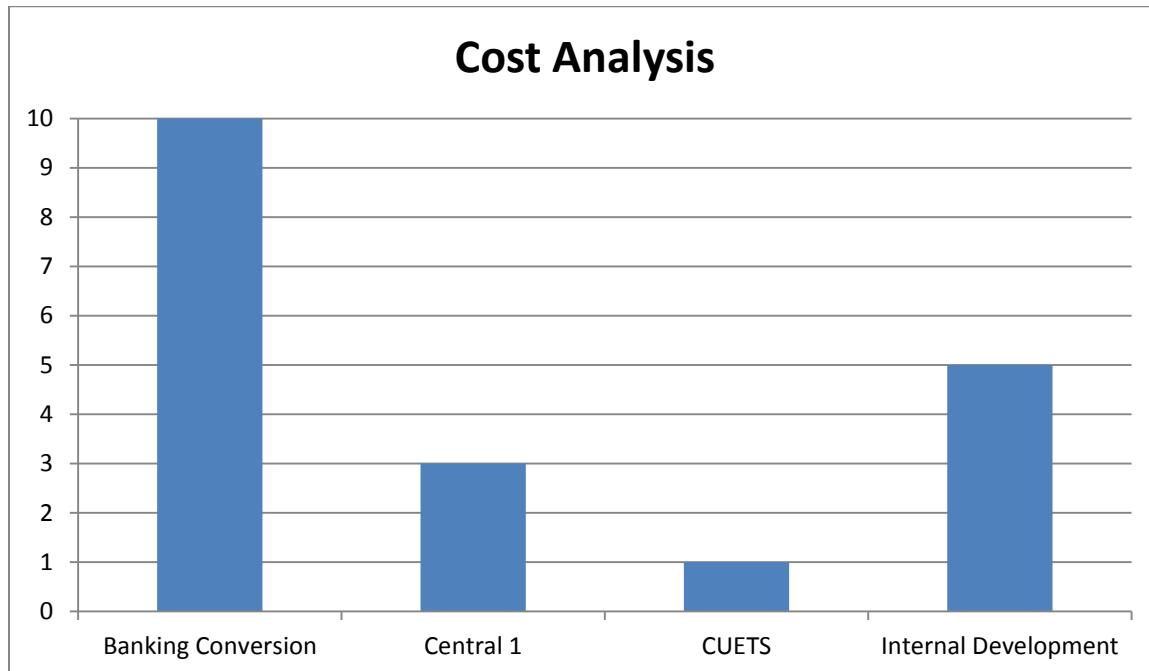
Figure 8.1 Gap Analysis Rankings



Source: created by authors

From the detailed analysis, we found that a full Banking Conversion and Internal Development would have few to no gaps. This is because a banking conversion would mean that there is no need for a Shared Branching solution and the flexibility of developing a solution in-house means we are able to satisfy all requirements. However, the Central 1 solution has a few gaps because currently no product that can be used to address the gaps exists. On the other hand, our conversation with Central 1's lead architect indicated that future products from Central 1 might be able to address these gaps. Lastly, the CUETS solution has many gaps. The most important one is that only credit unions that provide CUETS produced chip cards are able to use this service. Envision already uses CUETS produced chip cards, but Valley First does not. Therefore, this significant gap needs to be addressed if First West decides to implement this solution.

Figure 8.2 Cost Analysis Rankings

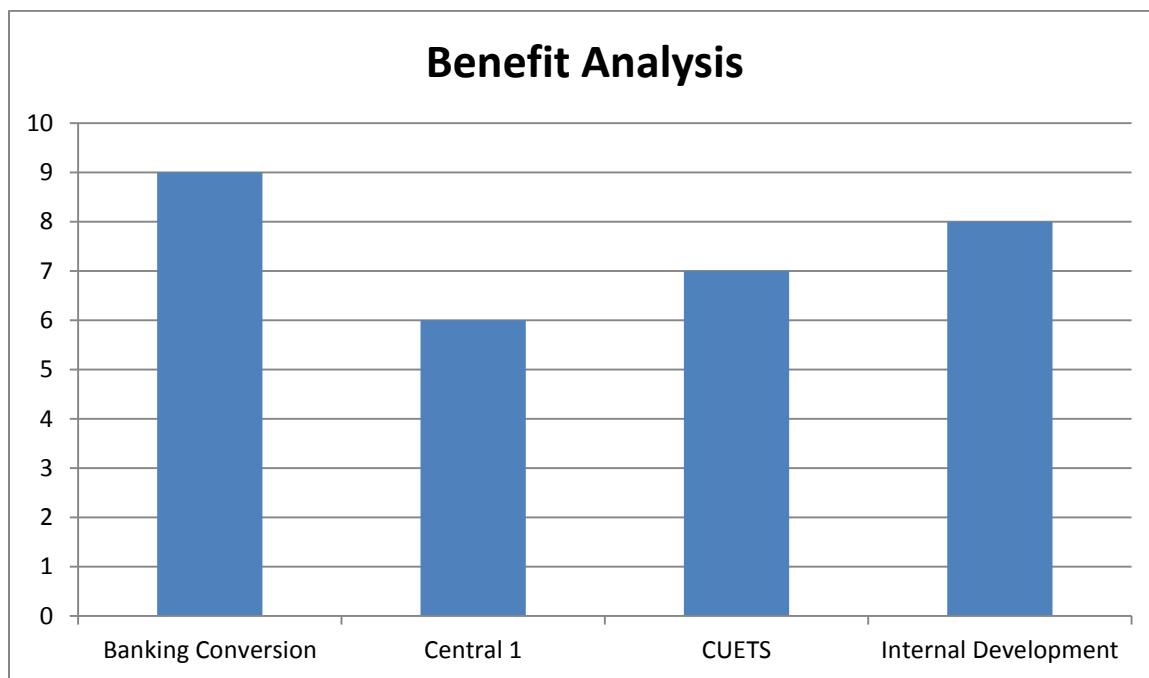


Source: created by authors

As we can see from Figure 8.2, a Banking Conversion is by far the most costly option. Table 8.1 shows that a typical Banking Conversion can cost upwards of \$5.5M for a credit union the size of Valley First, which is only the 18th largest in Canada. Currently, the CUETS solution incurs the least amount of capital and operational costs. However, the CUETS solution has the potential to have higher operational and recurring costs as it will involve a monthly rental fee plus a fee per transaction. First West does not anticipate a high volume of transactions; however, in the years to come, this may change and increase the costs for this solution. The costs for Central 1 are similar to the costs for the CUETS solution with the exception of per transaction costs. The bulk of the costs incurred by the Central 1 solution are for the custom development, while the operational costs are simply additions to the licensing fees that both Envision and Valley First already pay. Internal Development has insignificant recurring costs, as it will be an application that will be supported by internal resources. Therefore, it will be part of their day-to-day activities to support and maintain a new application. Nevertheless, there are

very high upfront costs associated with the design, development, and testing required to develop a solution of this magnitude from scratch.

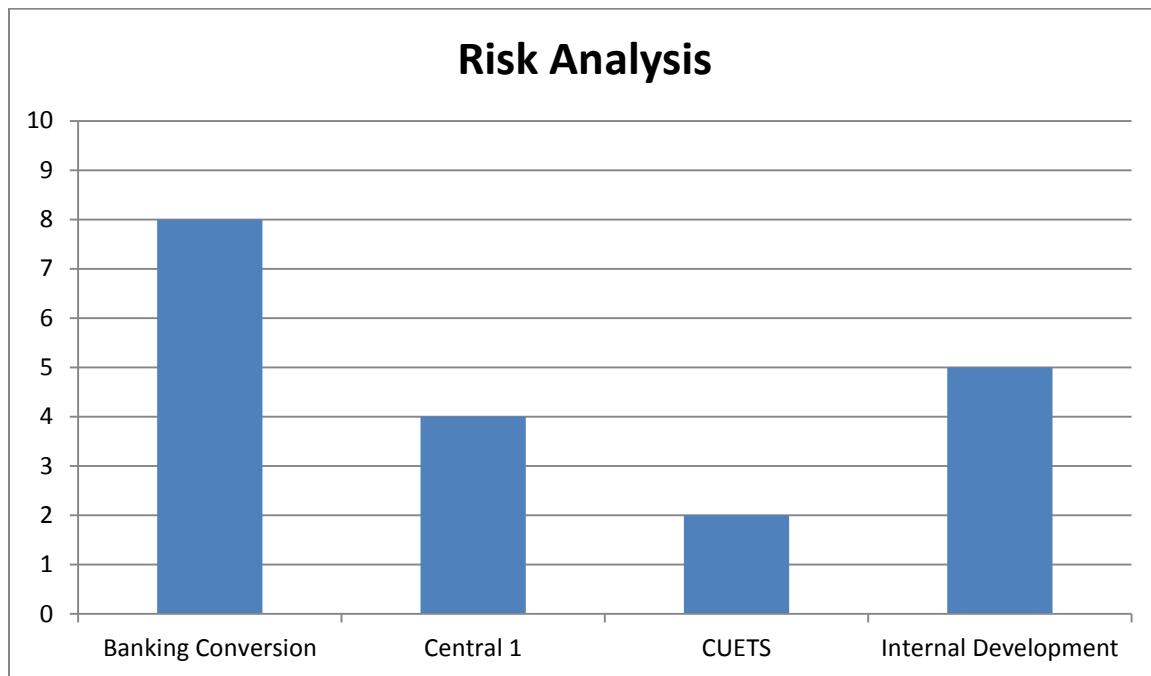
Figure 8.3 Benefit Analysis Rankings



Source: created by authors

The benefits analysis, presented in Figure 8.3, indicates that all of the solutions have similar and positive rankings. All of the solutions have many benefits; however, if we ignore the costs, the Banking Conversion and Internal Development provide the highest level of benefits. The reason why a Banking Conversion has the most benefits is simply because there is no longer a need for a Shared Branching solution. All the data is in the same place, and therefore all branches will have access to every First West member's information. Furthermore, many other technology benefits accrue from having all of the data in the same format and structure. The most valuable benefit Internal Development offers is that it will work with any banking system platform. It becomes very easy to add new credit union partners in the future. One of the benefits shared by Central 1 and CUETS is that these solutions use existing technology and products. The Central 1 solution will be integrated with its Internet Banking solution, while the CUETS solution will be integrated with the member's credit / debit cards and the CEBS Card Devices (see chapter 7), which the branches already use.

Figure 8.4 Risk Analysis Rankings

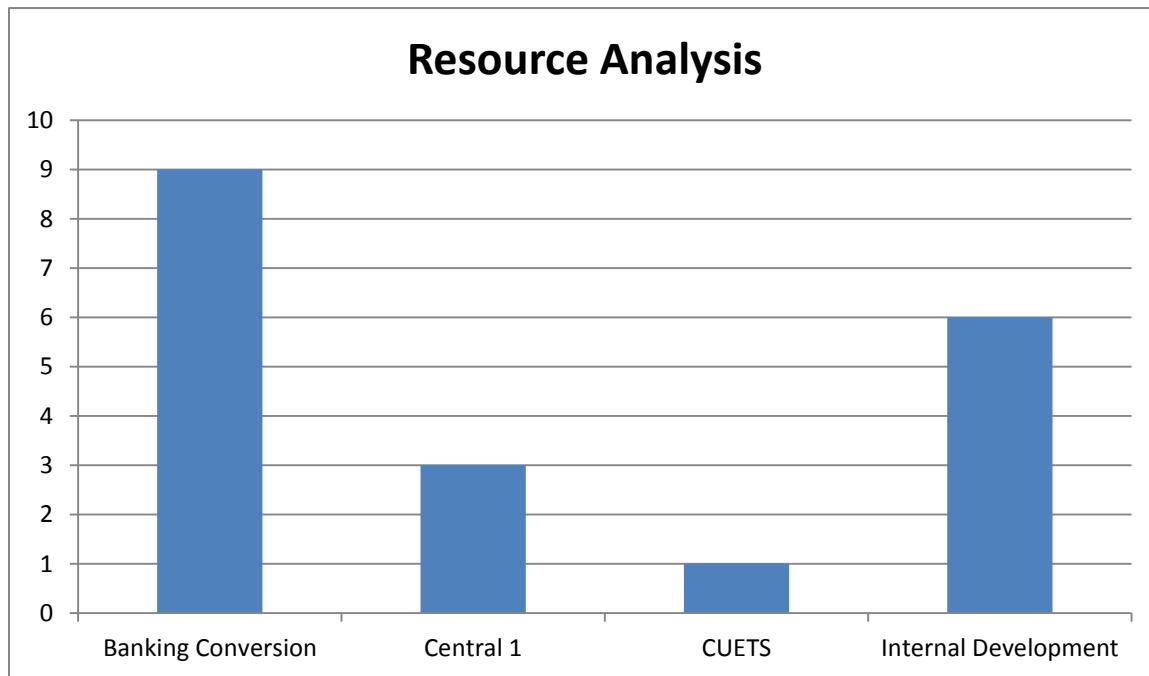


Source: created by authors

All IT projects have an associated level of risk. While most of these risks can be managed, it is much easier to implement a solution that has less risk attached to it. Our assessment of the level of risk is determined by how likely it is that there will be negative member impact – the chance of needing to rollback due to significant issues, the chance of going over budget, and the chance of not being completed on schedule. History indicates that there is a high level of risk with a full Banking Conversion. A large percentage of banking conversion are over budget, delayed, and have significant issues after the go-live conversion that usually have direct member impact. Both Central 1 and CUETS have many customers using their services, including Envision and Valley First. However, since the solution that would be provided by Central 1 is a completely customized solution, there is the added risk that things may go wrong during the development and testing phases, and that unforeseen real-life scenarios create issues for the members using the service. The main risk associated with CUETS is the transaction costs, and CUETS' ability to raise these costs at any time. Since the service is in production, with over 200 credit unions using it today, the risk of implementing this solution is quite low. Similar to the Central 1 solution, Internal Development would be a brand new product, and so, there is the risk of going over budget, underestimating the amount of work, which would push out the schedule, and the possibility of having issues

after the product is in production because of scenarios that were not thought of and tested. However, since in-house resources would be investigating and fixing any issues that arise, these would be treated as critical production issues that would be investigated and resolved as quickly as possible.

Figure 8.5 Resource Analysis Rankings

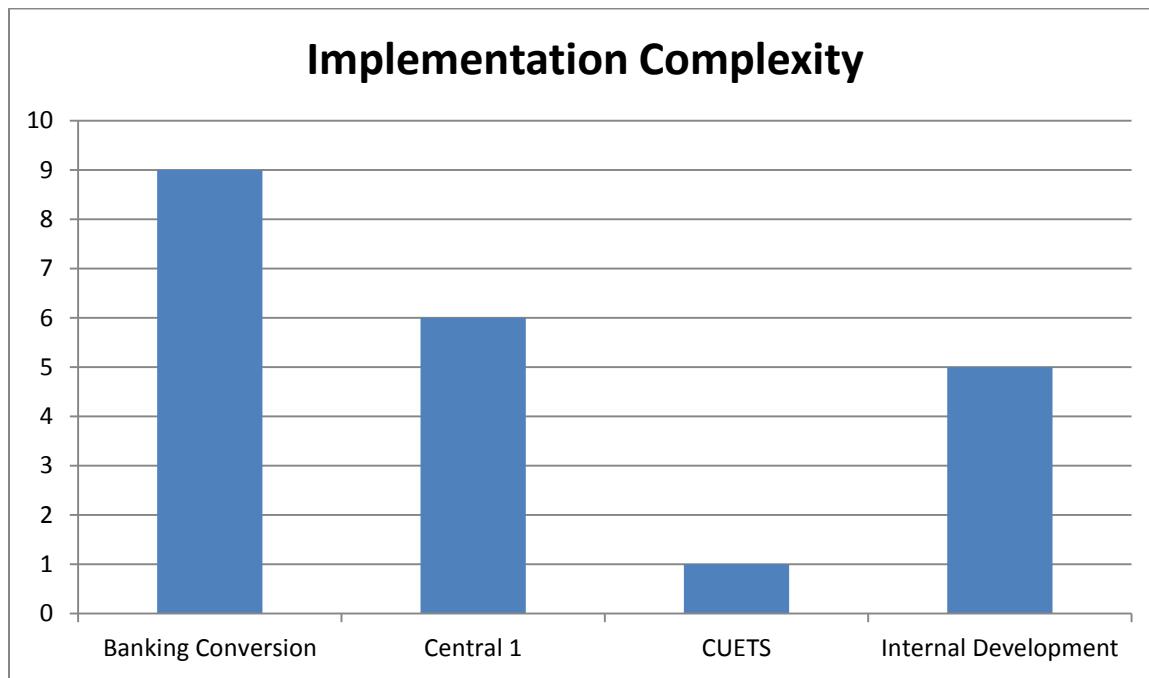


Source: created by authors

The resource analysis is a straightforward ranking system. It is based strictly on the total number of resources required to implement each solution, both internal resources and external resources. The Banking Conversion solution requires the most resources. This is largely due to the number of business analysts, quality assurance testers, and key subject matter experts from each of the credit union departments / functions needed to ensure the conversion is mapped out as the business requires. Furthermore, since the Banking Conversion is a lengthy project, the resources are tied up for a long period of time and, in most cases, unable to work on other projects. If a solution were developed in-house, the length of the project is also quite long; however, the number of resources required is lower than a conversion, yet it is much higher than the other two solutions. The majority of the resources required to implement the Central 1 solution is from Central 1 since they will be developing a custom solution for First

West. CUETS requires the least amount of resources as it is already a service that is in production and used by many credit unions. The resources required are to test the product with each of the banking systems prior to releasing it into production.

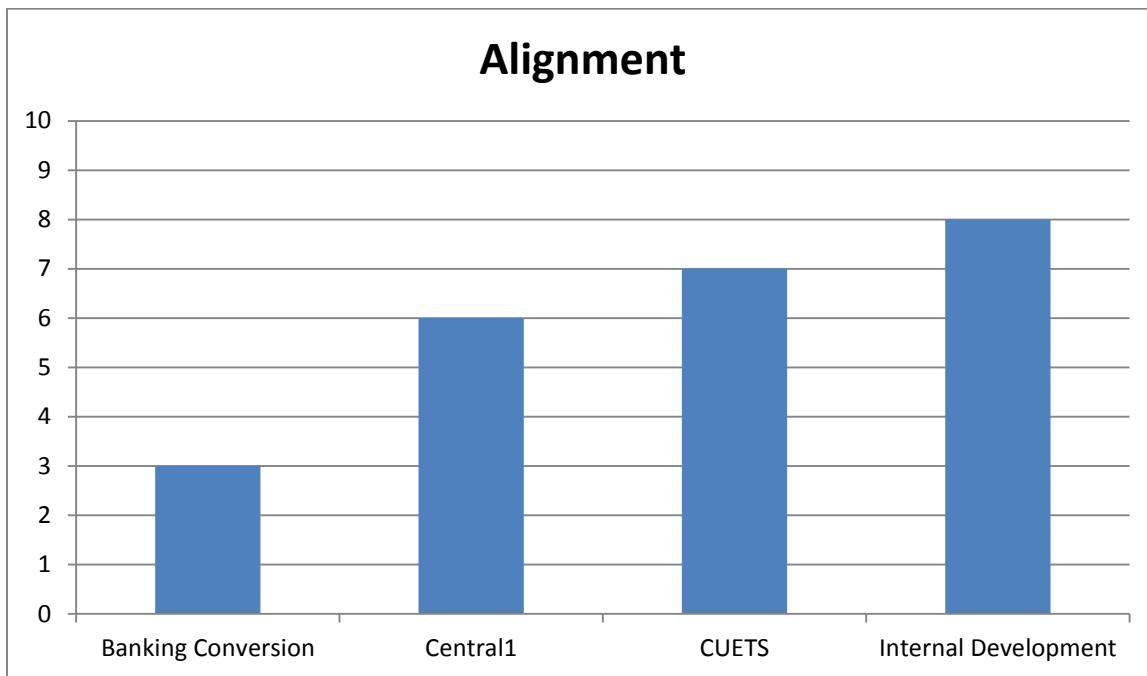
Figure 8.6 Implementation Complexity Rankings



Source: created by authors

The implementation complexity is somewhat linked to the number of resources required, the length of the project, and the amount of development required. This is evident by looking at the CUETS solution. Implementation is as simple as signing a contract with CUETS to enable a feature to allow financial transactions through the CEBS Card Device, which both Envision and Valley First already have, and testing it before it is turned on in a production environment. At the other extreme, Banking Conversion is very complex as it involves lots of development, business coordination, vendor coordination, and testing. The complexities with the Central 1 and Internal Development solutions are more around the development and testing of the custom solution prior to launching it in production.

Figure 8.7 Alignment Rankings



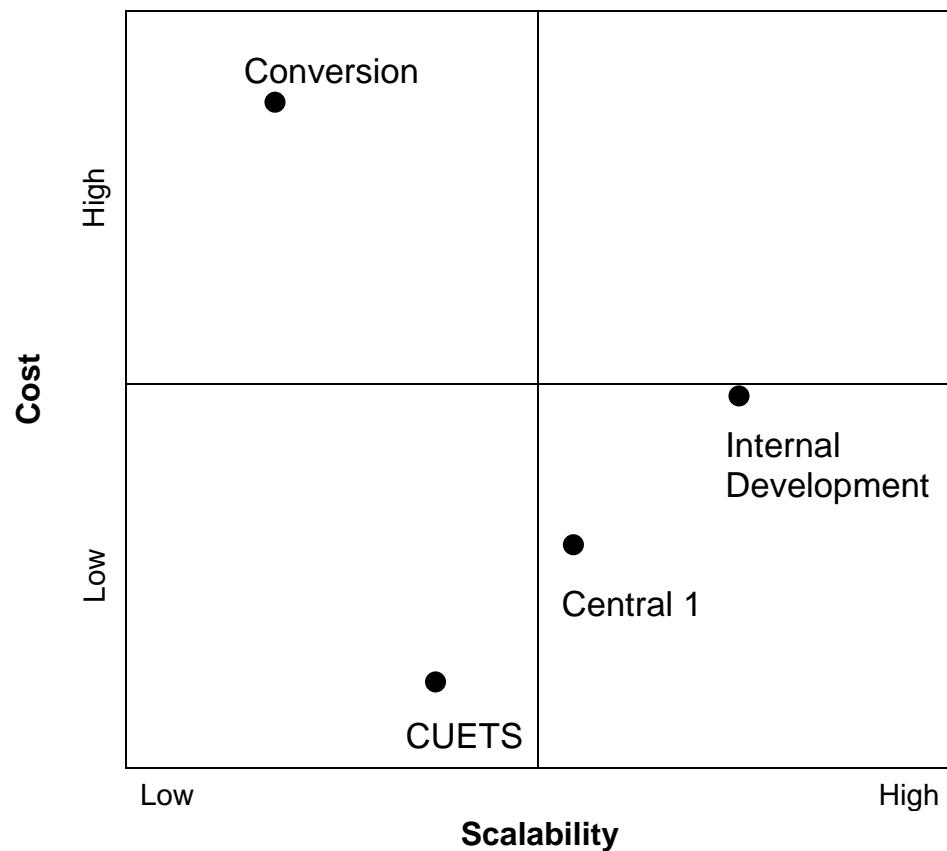
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As well as the costs associated with each solution, the business alignment is the other key factor First West needs to consider. The alignment section presented in Chapter 4 – Chapter 7 had four sections: Cost, Proven Solution, Reliability, and Scalability. From our conversation with Shelley Besse from First West Credit Union, having a solution that is not too costly, yet has the potential to add additional credit unions partners are the two most important attributes. We used all four of the criteria we mentioned in the alignment section to rank the solutions. The obvious reason why Banking Conversion ranks lowest in this category is its extremely high costs and low scalability. The other three solutions rank somewhat evenly, and the reasons are that the costs were not too substantial, and all three are either scalable or very scalable. Similarly, all three will most likely be reliable solutions since Central1 and CUETS have good reputations for providing good customer support, and the Internal Development will be maintained in-house and the reliability will rest with inUnison.

The previous figures and Table 8.1 gives a good indication of what each solution has to offer and what it will take inUnison to implement. As just mentioned above, the two important attributes First West executives will be looking at when deciding which solution to select are overall costs and scalability. First West does not want to spend a substantial amount of money implementing a Shared Branching solution, as they do not

anticipate many members making use of this service. Rather, this service offering will be a value-added service for members, and provide additional flexibility. We believe that implementing a Shared Branching solution before it becomes the industry norm will help ensure members do not move their financial services to other institutions. Therefore, the strategy is to ensure a Shared Branching solution is offered, but at the same time, control the costs that are associated with it. Scalability is the other important factor and it is directly linked to First West's long-term strategy. In Chapter 2, we described First West's long-term strategy and the possibility of adding additional credit union partners to expand its geographical reach. First West executives believe that it is important that the solution must not be too costly and/or difficult to implement when a new partner joins. A "plug-and-play" solution would be ideal. Figure 8.8 places each of the solutions on a 2 x 2 matrix using these two attributes.

Figure 8.8 Cost/Scalability Matrix



Source: created by authors

From the figure above, the most desirable solution when looking at scalability and cost attributes would be a solution that falls into the bottom right corner of the matrix. This is where the costs are the lowest and scalability is the highest. While this matrix shows there are two solutions that fall into this category, we cannot ignore the other factors that we have analysed. We have detailed our recommendation for First West Credit Union below.

Based on our analysis, we have not found a solution that meets all of First West's objectives. Therefore, we are recommending a short-term and long-term solution. Since First West would like to offer a Shared Branching solution as soon as possible, we believe that they should implement the CUETS Enhanced Branch Services (CEBS) solution. Both Valley First and Envision already have the CEBS devices in their branches, and consequently the cost implications to enable the ability to perform financial transactions are extremely low. Furthermore, the time to implement this solution is also very short and not complex as it only involves some testing to ensure it will work with Envision and Valley First business processes. One of the problems with this solution is that it will only work for CUETS produced chip cards. Valley First does not use CUETS as its card producer. Once they start issuing chip cards, Valley First members will be unable to perform Shared Branching transactions. Since Interac has mandated that credit unions must convert all of its cards to chip by December 31, 2012, Valley First will have to start replacing its current cards with chip cards within the next two years. If we assume that Valley First does not start replacing its cards until July 2012, the CEBS solution will work in the short term as any magnetic stripe card will work with the CEBS card device. While we do see the benefits of having both Valley First and Envision using CUETS as its card producer, we do not recommend that Valley First convert all of its cards to CUETS since this will be a large project, which will come at a high price and have high member impact. However, if Valley First were to use CUETS as its card producer, it would make the most sense to make this switch once they decide to start issuing chip cards. Since there are not any high costs associated with implementing or disabling the CUETS solution, the CUETS Enhanced Branch Services provides First West the ability to offer inter-regional banking to its members very quickly.

Our assumption for the long term is that Valley First will not switch its card producer, which means the CUETS solution is not feasible for the long term.

Furthermore, if First West finds a new partner credit union and they are not using CUETS as its card producer, they will have the same issue of not being able to offer its members the ability to perform transactions at any of the other branches. Therefore, we believe another solution needs to be implemented while the CUETS solution is in place. From the remaining three solutions, we can rule out a full banking conversion, as this is not in line with First West's long-term strategy as we understand it. Therefore, we are left with either the Central 1 custom solution or developing an interface in-house. The Central 1 custom solution does not make a lot of sense in the long term, simply because this would mean First West and inUnison would have to work with Central 1 on an ongoing basis to support the custom solution. However, our conversations with Central 1 and its lead architect lead us to believe they are currently investigating a solution that would meet First West's needs. We were informed that Central 1, along with a group of credit union representatives, is currently working to identify the needs for such a solution. However, a timeline of when the details for this new product / service would be available was not given; and a high-level estimate of when this product / service would be available was not given. An in-house solution would need to tie up many resources, and potentially require hiring more resources to work on the rest of the projects that are underway. However, the internal development option provides the most flexibility for the long term, and it has the least amount of gaps when compared to the other solutions. Therefore, our recommendation for the long term is to continue to work with Central 1 to try to get updates to the status of the Shared Branching product they are working on, and at the same time start the process of investigating the feasibility of developing a solution in-house. If the Central 1 solution appears to be available in the near future, then First West should continue to use the CUETS solution until the Central 1 solution can be implemented. However, if it becomes evident the solution from Central 1 is still a few years away, we believe developing a solution in-house makes the most sense, assuming the initial investigation proved the solution to be feasible.

8.3 Conclusion

The purpose of this paper is to research options for implementing a Shared Branching Solution for the newly created First West Credit Union, which has two sub-brands – Envision Financial and Valley First. The strategic issue First West faces is that its sub-brands are running different banking systems, and so members of each sub-

brand credit union are unable to perform banking services at the other credit union branches.

In order to analyse and compare the various options, we developed a set of criteria using existing tools and frameworks to ensure each option went through the same analysis. These criteria, established in Chapter 3, is comprised of, gap analysis, cost-benefit analysis, risk analysis, resource analysis, implementation details, and business alignment. These criteria should also be used in future software selection projects at First West Credit Union and/or inUnison Technology Services. During our research, we ran into various issues collecting the data we needed in order to perform an in-depth analysis. The issues were related to time constraints, lack of response from the vendors, and the unwillingness to share information. For example, CUETS Financial would not provide much information until inUnison signed a non-disclosure agreement (NDA), even though Envision Financial has contracts with them. The process to get the NDA created and signed took several weeks and delayed our research. It was also very difficult to obtain full cost details of the conversion Valley First completed last year. Given the data we were able to collect, we had to make several assumptions and estimates in order to provide a complete analysis.

Our research has revealed that not many solutions are available in the market, and those that are available have several limitations. We analysed and compared four solutions, all of which ranked differently when using the various tools and frameworks. The first solution, undertaking a full banking system conversion, proves to be too costly, lengthy, and risky; moreover, the solution is not scalable because First West will have to undergo another banking system conversion each time as long as the future credit union partner runs a different banking system. Secondly, we analysed a proposed custom solution from Central 1 Credit Union, a service provider in the Canadian credit union market. A possible Central 1 solution shows some promising potential, but we need to continue to work with Central 1 to determine the actual feasibility in developing such a solution within the timeframe required by First West. CUETS Financial, another service provider in the Canadian credit union market, already has an existing service – CUETS Enhanced Branching Services that offers Shared Branching capabilities. However, the downside with the CUETS solution is that its uses debit cards to perform inter-regional transactions and only CUETS-issued chip cards will work with this service. While

Envision provides CUETS-issued chip cards, Valley First does not; therefore, this solution will only work until Valley First begins issuing chip cards. The last option we analysed was to develop a solution internally. inUnison Technology Services employs various software developers and infrastructure engineers, who have the expertise to design and develop such a system. However, undertaking such a complex development project does expose the company to risks such as high development costs and unpredictable technology obstacles. Therefore, none of the four solutions is a perfect match for First West Credit Union's Shared Branching initiative.

With the future landscape of the Canadian credit union industry looking as if it will be reshaped due to the federal legislation permitting credit unions to expand nationally, we believe it is only a matter of time before many solutions become available that would be suitable for First West. However, given that First West would like to get a head start on the Shared Branching service, we provided a recommendation for the short-term and the long-term. In the short-term, implementing the CUETS Enhanced Branch Services will provide First West with an immediate solution. Implementing a solution internally or working with Central 1 to define the Shared Branching product they plan to develop would serve as an ideal long-term solution. We believe that our recommendation will best serve First West Credit Union and both of its sub-brand credit unions – Envision Financial and Valley First.

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