**Requirements Document
Business Scenario Report: Mortgage Center**

Version <1.1>

Revision History

Date	Version	Description	Author
23-Jan-02	<1.0>	Initial draft	Alan Kropp
11-Feb-02	<1.1>	Add references, scenario diagrams	Alan Kropp

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1. Scenario Name

1.1 Description

This scenario describes a financial application vendor who creates and sells a mortgage center application for its clients to in turn offer to their end users. The benefit to the vendor is the ability to offer clients a privately branded bundle of mortgage-related services, to provide multiple revenue streams to both vendor and client, and to drive future professional services business.

2. Participants

2.1 Vendor

2.1.1 Role

The vendor is an application developer that creates and sells software and services to clients in the retail financial services industry.

2.1.2 Relationships

The vendor's primary business objective is to sell professional software services to clients with a strong local or regional focus. While word-of-mouth, yellow pages advertising, trade shows, etc., drives a certain amount of business, the vendor would like a turn-key solution that any potential client can integrate into an online offering, and thereby establish a relationship which could in turn lead to future business.

2.1.3 Business Objectives

- Establish new client relationships, and strengthen existing ones, with minimal sales effort
- Drive future professional services business
- Derive revenue from usage of 'premium' add-on services

2.1.4 Solution Requirements

The solution is to create a component called the Mortgage Center, which can be quickly and seamlessly integrated into a client's existing online presence. The Center is built around the Mortgage Calculator service, a simple and easily implemented service that the vendor will offer freely, as a "loss leader" for other services.

2.1.4.1 Business Needs

- *Integrated services.* Host access to partner services (e.g., credit scoring), and the option to collect revenues on premium services.
- *Customer site integration.* Integrate seamlessly with existing customer site
- *Private branding.* Client has control over aspects of branding, presentation, some content

2.1.4.2 Technology Requirements

- *Push updateable.* Push updates and bug fixes to clients on a scheduled/as-needed basis
- *Quick integration.* Support instant (one or few clicks), out-of-the-box integration
- *Statelessness.* The application will not require support for persistent state longer than the user session.
- *No Access Control.* User-level authorization is not required in order to access services.

2.1.4.3 Functionality

Main functionality Use Cases follow.

- *Entry.* Users hit a specific start page that presents the various services, as well as descriptive text.
- *Navigation.* As the user accesses features on the start page, she is redirected to results pages, or to intermediate pages to enter detailed information, before proceeding to a result. Some links on the page(s) may direct the user to external sites, and this should take place without interfering with the process flow (i.e., the user may later resume where she left off).
- *Reporting.* User activity is captured for two reasons. First, the client may wish to know basic statistics about site usage. Secondly, the vendor needs to capture usage of premium services, in order to bill back the client. Note that these do not include *a la carte* services that the end user pays for directly (e.g., personal credit report).
- *Services.* The basic free service is a mortgage calculator. Other services, free or premium, can be installed at any time by the vendor, and pushed out to clients.
- *Client customization.* The component must offer an 'Edit' capability that permits the client to modify presentation and content, to the extent allowed by the vendor, with minimal technical effort. This could require a user presentation that supports forms-based update and maybe WYSIWYG presentation building.

2.1.4.4 Usability

The presentation must be geared to a novice Internet user.

2.1.4.5 Reliability

24x7 availability required of free services and hosted premium services is expected.

2.1.4.6 Performance

Performance for hosted services must be assured by the vendor to support anticipated heavy end user activity, with the typical user spending an average of five minutes navigating and accessing services.

2.1.4.7 Supportability

2.1.4.8 Constraints

2.2 Client

2.2.1 Role

The client is involved in the real estate financing market, offering related services to home owners and home buyers. These could be lending institutions, realtors, mortgage brokers, etc.

2.2.2 Relationships

The client uses the vendor's technical services to build and maintain internal business systems in support of operations. This typically includes accounting, sales lead tracking, and web site creation and management. Engagements with the vendor are usually project-based, on a time and materials basis.

2.2.3 Business Objectives

The client would like to enhance the usefulness and "stickyness" of its web site, as a means of generating awareness and future business from potential and existing customers.

2.2.4 Solution Requirements

The solution will be deployed and maintained by the client's non-technical staff, and must therefore be designed with the goal of easy maintainability, and quick, out-of-the-box deployment. The client is not expected to hire additional technical staff, or incur any but minimal additional costs, in deploying and maintaining the application.

2.2.4.1 Functionality

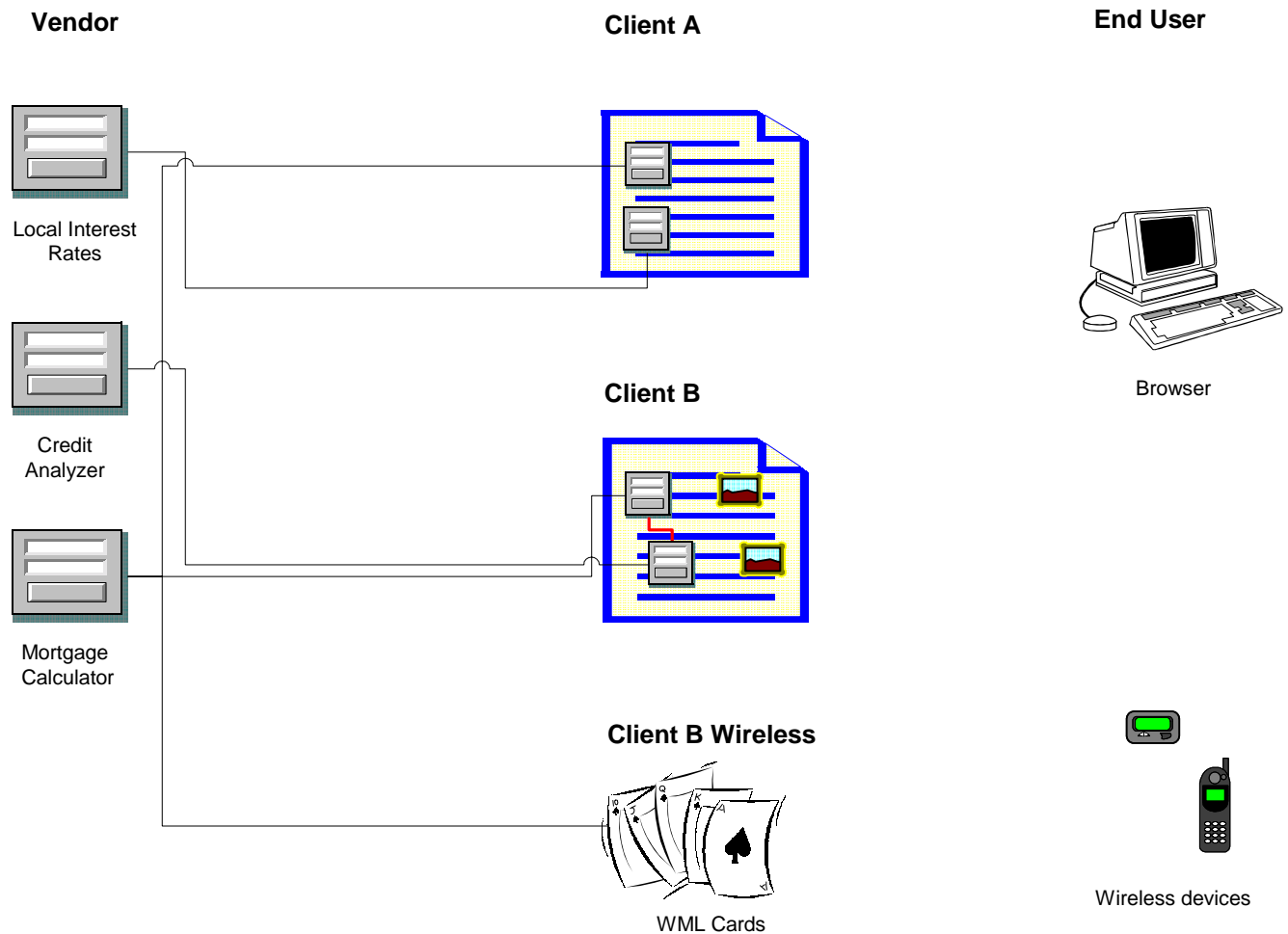The client desires the following prior to displaying any new services to the end user:

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- In an XHTML/XForms browser display, put the calculator app within a set of web pages that contain other applications.
- In an XHTML/XForms browser display, change the branding: change the colors and fonts of the app, insert company logo somewhere between the individual controls on one page of the app (like after the last dropdown and before the submit button).
- Add new questions asked, depending on answers given to the original questions. These questions are interspersed within the original questions, maybe on the same page as original questions, maybe on different pages.
- Add new options to existing questions: the calculation is for US locations, but this is a Canadian lending institution. The business calculation also has to be adapted, too.
- Remove the lowest price range on the house price dropdown because this is a lending institution for high-end houses.
- Tweak how the calculation of the home price affects the final number.
- Remove a question about property location and provide a hard-coded location because the ending institution is local to one town.
- Tweak the generic property tax value of the calculation to be the exact local property tax of the local city.
- Perhaps adapt the display to a phone system or adapt the display to PDA's used by lending agents in the field.
- Automatically receive updates and bug fixes to the application, as long as they don't affect the adaptations. If they affect the adaptations, they want to be notified before accepting or dealing with the changes.

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3. Scenario Diagrams

3.1 Component Integration and Flows

Vendor　　　　　　　　　　**Client A**　　　　　　　　　　**End User**

Local Interest
Rates

Client B

Credit
Analyzer

Browser

Mortgage
Calculator

Client B Wireless

WML Cards

Wireless devices

3.2 Notes

- The diagram depicts a number of potential client deployments of the vendor's components, targeted at both browser-based and wireless end users.
- The vendor offers a number of components for clients to integrate into their own sites.
- The clients integrate one or more of the components into their sites.
- Client A offers a simple site, less graphically intensive, with both the Mortgage Calculator and Local Interest Rates components made available on the page. The client would have to configure the Local Interest Rate component to display interest rates for the correct locality. See the following section for more on component configuration.
- Client B offers two site options. For browser-based users, there is a graphically rich site, with both the Mortgage Calculator and Credit Analyzer components.

- The two components are involved in a collaborative flow. Data entered by a user in the calculator can pre-fill certain fields in the Credit Analyzer. This saves the user the additional keystrokes, and contributes to a more seamless experience.

- Client B also offers a wireless option for users of PDA's, wireless-enabled cell phones and two-way pagers. Out of necessity, this is considerably simpler relative to the browser-enabled site. Just the Mortgage Calculator is offered, and its interface is served to end users in the form of WML cards. The client could offer additional components, perhaps via a simple menu, but inter-component collaboration in such a constrained environment is probably overkill.

3.3 Component Configuration

The usefulness of the components depends to a large extent on the clients' ability to configure them to suit their particular locality, user base, market, presentation style and branding, etc. On the other hand, the vendor also has a vested interest to ensure the usability of the components, as well as to unobtrusively promote its own brand.
In the following diagram, the Mortgage Calculator presentation configuration view is depicted, with client-configurable areas indicated by dashed lines. The solid-lined "Powered by…" box is fixed by the vendor.
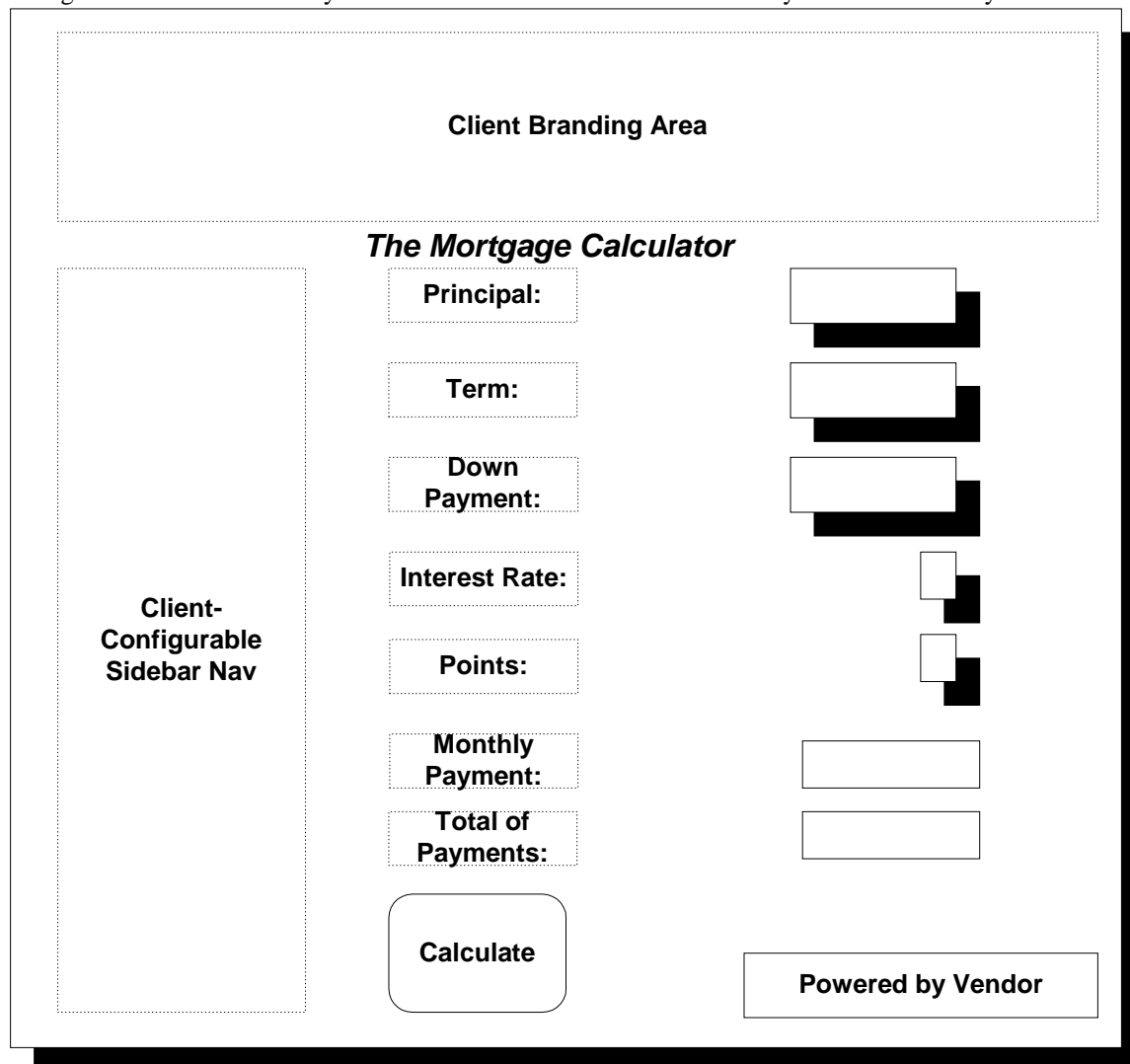
Beyond branding and label text, however, the component must support the ability for the client to modify the

content and ordering/placement of fields. For a component with a logical flow of questions asked of the user, it should support the ability to add or delete questions. Finally, there may be "hidden" component properties to be set, such as localization, or enumerated lists of acceptable values for interest rate and term.

4.   References

For an impressive list of mortgage calculators, as well as other financial calculators, refer to Mortgage-Calc.com at http://www.mortgage-calc.com/