



**Requirements Document**

**Project**

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**Record of Release**

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# Introduction

## Overview of the Requirement Specifications Document

### Purpose of the Document

Primary purpose of the document is to provide detailed Software Requirement Analysis of the XXX Virtual Branch E-Commerce Portal. The document serves the purpose of reference during and after the latest design is being implemented to the existing web portal.

### Distribution List

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# Application Environment

## Business Context

Virtual Branch (VB) is a Web Portal that serves as an online e-catalogue of XXX Products and their documents, while allowing a basic quote creation functionality. It was implemented on 24th of May in 2011 and is currently mainly used by XXX customers of the EMEA Business region.

It has lately become a significant part of the new Market approach strategy. For this purpose, business is consistently demanding new enhancements on the tool, which will enable to:

* + - * Increase sales capacity to effectively address geographical areas (especially those in which XXX branches does not have presence),
      * Simplify operations (direct & indirect business) to increase effective time spent on pure selling activities, thus focusing on sales strategies rather than on sales support activities,
      * Understand customer needs, re-think and re-share business processes that could potentially benefit from digital technologies.

## Limitations of the Current System

Current Virtual Branch application is self-sufficient as an E-Commerce platform for XXX, but since it’s developed 7 years ago so it lags with older technology stack which limits the functionality development and increasingly risks the integration with upcoming technologies in the market. Plus, the design is also lacking the latest trends of the modern web applications which offsets the user experience for the application.

## Scope of Work

* Integration of New static HTML pages with backend web services using AngularJS
* Development of existing VB pages along with newly developed pages like My Account and Company Account Page
* Search Capability enhancement for Virtual Branch
* Product Comparator page development
* In Page SEO for Virtual Branch
* Security Testing as per OWASP 2017 Top 10 vulnerabilities

### Assumptions

#### Responsive UI Development is based on the following assumptions:

* HTML and CSS development for 23 Pages
* Existing source code will be shared and made available
* Off-Page SEO such as Social Media Engagement, Social Bookmarking Sites, Forum Submission, Blog Directory Submission, Article Submission etc. have not been considered in estimation

#### Core Application Development is based on the following assumptions:

* Development shall be made as per business requirements which shall be elicitated by Business Analyst from Business team
* Requirements not finalized by business but is included in scope shall not be considered for development purpose

### User Profiles

|  |  |
| --- | --- |
| **User Profiles In VB** | |
| Account Managers | XXX Product Management |
| Consultant | XXX Technician |
| Customer Admin | Pricing Manager |
| Customer Center | Product Director |
| Customer Field Technician | Public Registered |
| Customer Technical User | Purchaser |
| Customer User (Sales) | Regional Director VP |
| ESB System Admin | Regional Manager |
| Factory User | Technical Support |
| XXX Employee | VB System Admin |

# Requirements Specifications

## Details of requirements gathering process

Requirement gathering processes covered for developing the current requirement specification documents are detailed as below;

* Interviews of Business Representatives
* Brainstorming sessions with Business Representative
* Study and usage of existing Application Usage and Legacy documentation

## References to Client’s documents

|  |  |  |
| --- | --- | --- |
| **Business Process** | **Description** | **File** |
| Sales Order Process | End-To-End Sales Order creation process for VB |  |
| Customer Training Request | Training Request process for a customer in VB |  |
| Customer Discount Request | Discount Request workflow for MEA users |  |
| Split Order Request | Split Order Delivery process for VB |  |
| Support Request | Support Request for Registered user in VB |  |

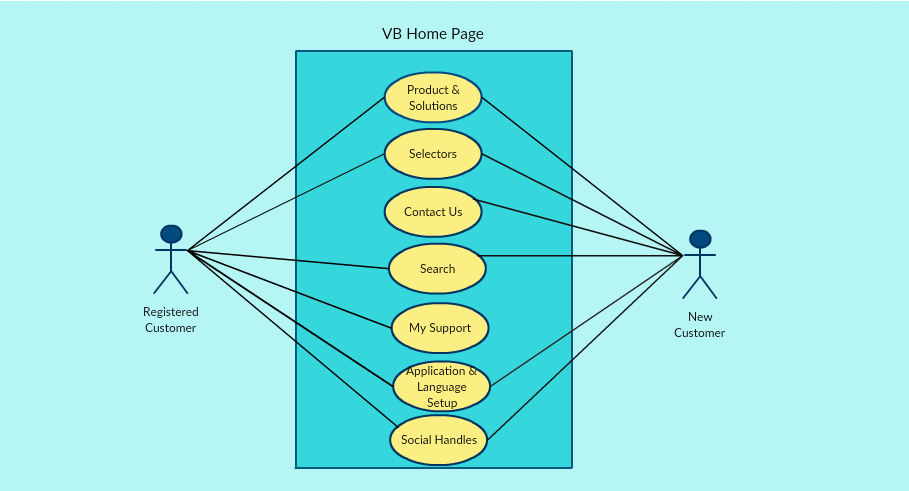
## Functional Requirements

### Requirement Quick View

|  |  |  |
| --- | --- | --- |
| **Requirement ID** | **Page Name** | **Brief Description** |
| [REQ.01](#REQ01) | HOME PAGE | Primary Menu for not logged in user |
| [REQ.02](#REQ02) | HOME PAGE | Product & Solution component for not logged in user |
| [REQ.03](#REQ03) | HOME PAGE | Selector Component for not logged in user |
| [REQ.04](#REQ04) | HOME PAGE | UI Language Component for not logged in user |
| [REQ.05](#REQ05) | HOME PAGE | Banner section for not logged in user |
| [REQ.06](#REQ06) | HOME PAGE | Search Component for not logged in user |
| [REQ.07](#REQ07) | HOME PAGE | Language Selector Footer Component for not logged in user |
| [REQ.08](#REQ08) | HOME PAGE | Product Offering Section for not logged in user |
| [REQ.09](#REQ09) | HOME PAGE | Tools and Resources Component for not logged in user |
| [REQ.10](#REQ10) | HOME PAGE | Product Offering Component for not logged in user |

### Home Page

Home Page is the landing and most important page for VB application and it shall be the gateway for user to view product offerings by XXX, compare them and buy them. Users who start from Home Page may be registered i.e. logged in or not logged into VB. Thus, leading them to see products as per their availability and visibility rules.



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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.01 | Functional | Derived | High | Primary Menu not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | User not logged in shall be able to see primary menu as provided in Header area with ‘Contact Us’ Page | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. As part of visibility rules, a user not logged onto VB shall be able to see menu with Contact Us page 2. In Page Footer under Contact Us Section a link to ‘Contact Us’ shall be shown | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.02 | Functional | Derived | High | Product & Solution component not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. User shall be allowed to navigate products and solutions from primary menu as per the existing visibility rules in VB application to see the available items 2. Mega menu shall consist of maximum 8 products arranged in 4 columns at a time and have sliders if range number is more than 8 3. User shall not be able to view Add to Cart button with any of the products | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. On User Click Action on Product & Solution menu link, User shall be able to see Categories and on click of Groups he shall be able to see Ranges which are clickable to be redirected to respective Range Page 2. If Ranges are more than 8 into 4 columns, slider should get enabled | | | | |
| Images  a | c | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.03 | Functional | Derived | High | Selector Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. User not logged into VB shall also be allowed to use Selector from primary menu to filter and search products as per availability and visibility rules existing in current application | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. On User action ‘Click’ on Selector Menu link, user shall be redirected to Selector Page | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.04 | Functional | Derived | High | UI Language Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. User not logged onto VB shall be allowed to set language and UI localization from language preference button for VB 2. User Interface and Visibility rules are automatically set by browser setup as in current system locale 3. European English shall be set as default language for application interface | | | | |
| Scope | For a user not logged onto Virtual Branch, he shall be able to see the home page with primary menu | | | | |
| Method of Verification & Validation | 1. On User Action ‘Click’ on Globe or Application Language Setup Page, User shall be redirected to Application & Language Setup Page where, European English shall be set as default language | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.05 | Functional | Derived | High | Banner section for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. On banner section as shown below of home page, user needs to hover mouse on the section and this shall initiate the upward movement of line area providing user with details as well as a ‘Know More’ button 2. Banner can be locale specific, provision to be provided at backend to allow business to enter required links and images which shall be shown as per local in which the VB application is opened 3. User may click on the ‘Know More’ button to be redirected to the respective page link. 4. Provision to change labels and links in the boxes needs to be provided to business from backend in the form of database fields | | | | |
| Scope | For a user not logged onto XXX Branch | | | | |
| Method of Verification & Validation | 1. User Action ‘Hover’ shall provide upward scroll animation for Banner images 2. User Action ‘Click’ on ‘Know More’ button shall redirect user to either You tube link for video, or to specific range, series, product page as set from backend by business | | | | |
| Images |  | | | | |

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| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.06 | Functional | Derived | High | Search Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. On click of ‘Search’ icon the user shall open Search Bar 2. Search results are subject to existing Visibility and availability rules for the non-logged in user | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. On User Action ‘Click’ on Search Icon, it shall open Search bar from where User may start searching for Product Offerings, Documents, Item Codes and replacements 2. Product Offerings shall be default selected | | | | |
| Images |  | | | | |

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| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.07 | Functional | Derived | High | Language Selector Footer Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. On click of the ‘Language Preference’ button (Globe Icon) at footer level the user shall be redirected to Application and Language setup page | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. On user action ‘click’ on Globe icon shall redirect user to Application & Language setup page | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.08 | Functional | Derived | High | Product Offering Section for not logged in user | [Quick View](#HOMEPAGE) |
| **Requirement description** | 1. Category images shown shall be clickable and would redirect user to Mega menu with auto opening of Group and Ranges 2. Horizontal sliders to me enabled if the options to be displayed are more than 5 columns to be displayed 3. At a time, there shall be only 5 categories need to be shown on screen to user 4. Provision to change labels and links in the boxes needs to be provided to business from backend | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. User shall be able to see Categories as per visibility rules applicable to him as per his company and region 2. If Categories are more than 5 on screen, the slider shall get enabled | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.09 | Functional | Derived | Deferred | Tools and Resources Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. In the Tools and Resources section on home page as shown in image when a user clicks on ‘Know More’ button he shall be redirected to respective pages as provided by business in backend 2. Provision to change labels and links in the boxes needs to be provided to business from backend in the form of database fields | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. Tools and Resources shall be shown as per applicable visibility rules for user’s region 2. Non-Registered user shall be able to see ‘Contact Us’ icon in place of My Support 3. User Action ‘Click’ shall redirect user to respective page as maintained by business | | | | |
| Images |  | | | | |

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| --- | --- | --- | --- | --- | --- |
| Requirement Id | Requirement Category | Requirement Type | Priority | Component Section | Link to Quick View |
| REQ.10 | Functional | Derived | High | Product Offering Component for not logged in user | [Quick View](#HOMEPAGE) |
| Requirement description | 1. In the Product Offerings section as shown below in image on home page when a user clicks on Group icon he shall be presented with the list of Range Products associated with that Group 2. When user clicks on presented Range on click to them the user shall be redirected to the respective Series page 3. Provision to change labels and links in the icons needs to be provided to business from backend via Arca in the form of fields in database | | | | |
| Scope | For a user not logged onto Virtual Branch | | | | |
| Method of Verification & Validation | 1. Icons shall be shown as maintained by business in backend 2. Labels shall be shown as maintained by business in backend | | | | |
| Images |  | | | | |

### Security

Security Testing for VB and VBDesk shall be highly critical aspect for secure and integrated application, for the purpose developers need to utilize OWASP 2017 top 10 vulnerabilities to be tested in codebase of VB, the document for OWASP is attached here as below;

* Injection: Injection flaws, such as SQL, NoSQL, OS, and LDAP injection, occur when untrusted data is sent to an interpreter as part of a command or query
* Broken Authentication: Application functions related to authentication and session management are often implemented incorrectly, allowing attackers to compromise passwords, keys, or session tokens, or to exploit other implementation flaws to assume other users’ identities temporarily or permanently
* Sensitive Data Exposure: Many web applications and APIs do not properly protect sensitive data, such as financial, healthcare, and PII. Attackers may steal or modify such weakly protected data to conduct credit card fraud, identity theft, or other crimes. Sensitive data may be compromised without extra protection, such as encryption at rest or in transit, and requires special precautions when exchanged with the browser
* XML External Entities: Many older or poorly configured XML processors evaluate external entity references within XML documents. External entities can be used to disclose internal files using the file URI handler, internal file shares, internal port scanning, remote code execution, and denial of service attacks
* Broken Access Control: Restrictions on what authenticated users are allowed to do are often not properly enforced. Attackers can exploit these flaws to access unauthorized functionality and/or data, such as access other users' accounts, view sensitive files, modify other users’ data, change access rights, etc.
* Security Misconfiguration: Security misconfiguration is the most commonly seen issue. This is commonly a result of insecure default configurations, incomplete or ad hoc configurations, open cloud storage, misconfigured HTTP headers, and verbose error messages containing sensitive information. Not only must all operating systems, frameworks, libraries, and applications be securely configured, but they must be patched and upgraded in a timely fashion
* Cross-Site Scripting: XSS flaws occur whenever an application includes untrusted data in a new web page without proper validation or escaping or updates an existing web page with user-supplied data using a browser API that can create HTML or JavaScript. XSS allows attackers to execute scripts in the victim’s browser which can hijack user sessions, deface web sites, or redirect the user to malicious sites
* Insecure Deserialization: Insecure deserialization often leads to remote code execution. Even if deserialization flaws do not result in remote code execution, they can be used to perform attacks, including replay attacks, injection attacks, and privilege escalation attacks
* Using Components with known vulnerabilities: Components, such as libraries, frameworks, and other software modules, run with the same privileges as the application. If a vulnerable component is exploited, such an attack can facilitate serious data loss or server takeover. Applications and APIs using components with known vulnerabilities may undermine application defenses and enable various attacks and impacts
* Insufficient Logging and Monitoring: Insufficient logging and monitoring, coupled with missing or ineffective integration with incident response, allows attackers to further attack systems, maintain persistence, pivot to more systems, and tamper, extract, or destroy data. Most breach studies show time to detect a breach is over 200 days, typically detected by external parties rather than internal processes or monitoring
* Query string which are being used while transmitting data from server to client as part of key value pairs must be encrypted to prevent users from viewing and tempering the information contained in links

## External interface requirements

### User Interface

* Latest designed screen/menu as per XXX standards
* All pages need to be responsive as per operating platform like, Desktop, tablet and mobile and changes to size and resolution shall occur without breaking the interface

### Software Interface

* Software Interface of VB to external applications includes: Site Minder and Zendesk which shall be utilized to authenticate User Accesses and service ticket creation respectively
* VB shall also interface and is tightly coupled with VBDesk which is the XXX Service Desk application for VB

### Database Requirements

* Use of existing application’s database environment i.e. Oracle and MongoDB
* Restrictions on size of database objects shall be maintained as in current application
* Data Backup and Archiving procedure shall be followed same as in current application

## Other requirements

### Installation

Installation of SiteMinder web app on server to be utilized by development team for integration and user authentication

# Prototype/Current Application

Virtual Branch exists as application at location provided below;

# Acceptance

## Acceptance Criteria

Some of the Acceptance criterion for business to accept the deliverables are provided as below

### User Base to be catered by Application

Delivered product shall be able to serve following user profiles with the set of product visibility and availability rules as available in current application setup

|  |  |
| --- | --- |
| **User Profiles In VB** | |
| Account Managers | XXX Product Management |
| Consultant | XXX Technician |
| Customer Admin | Pricing Manager |
| Customer Center | Product Director |
| Customer Field Technician | Public Registered |
| Customer Technical User | Purchaser |
| Customer User (Sales) | Regional Director VP |
| ESB System Admin | Regional Manager |
| Factory User | Technical Support |
| XXX Employee | VB System Admin |

### Delivered Work Product

Delivered Product need to mirror current application in terms of functionality along with the new features to be added as mentioned in requirements with quality deliverables

### Application Testing Type

|  |  |  |
| --- | --- | --- |
| **Tests** | **Preparation Ownership** | **Execution Ownership** |
| Unit Testing | Project Developer | Project Developer |
| System Integration Testing | Project Tester | Project Tester and BA |
| User acceptance Testing | Business Team | Business Team |

# Abbreviations / Bibliography

|  |  |
| --- | --- |
| **Abbreviations** | **Meaning** |
|  |  |
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