

## DELIVERY 2

### Task 1 – Identifying and finding inconsistencies in the vision document

Time spent during the inspection: 55 minutes

#### Defects Table

Defect #	Location	Defect type	Classification	Description	Status	Date corrected
1	Page-2, sec 2.1	Omission	Major	Missing stakeholders affected by the problem, like brokers and system admins in problem statement		
2	Page-2, sec 2.2	Omission	Major	Missing target customers- brokers and system admins in Product position statement		
3	Page-3, sec3.1	Omission	Major	Missing Stakeholder information in the stakeholder summary		
4	Page-4, sec3.3	Unintelligibility	Minor	The information presented in the “User environment” section is in paragraph, instead of short and precise bullet points, which can lead to slight issue in understanding the content.		
5	Page 5, sec3.4	Omission	Minor	Missing some user needs like secure login, robustness of the application, feature of adding and removing broker etc.		
6	Page 5, sec4.1	Inadequacy	Major	The diagram lacks sufficient details and explanation. It doesn't adequately explain the relationships between the entities (broker, sys admin, and buyer) or the flow of the process.		
7	Page 5, sec4.2	Inadequacy	Minor	The assumption and dependencies given are more ‘general’ in nature. It should be specific to user requirements and does not adequately explain the details.		
8	Page 6, sec5	Omission	Major	Some core features are missing, like password recovery, notifications, feedbacks etc.		
9	Page 7, sec 6	Omission	Minor	Some hardware and standard features are missing.		
8	Page 2, sec 2.1	Ambiguity	Major	The statement “It also allows the broker to efficiently list all their properties in the province” is ambiguous. The word		

				efficiently does not clearly state in what ways the listing would be made efficient.		
9	Page 4, sec 3.3	Noise	Minor	The word 'scale' in the context of scaling the application does not provide enough information about distributed server implementation in the problem world feature.		

### Inconsistency Table

Time spent during the inspection: 90 minutes

No	Location	Inconsistency type	Classification	Description	Status	Date corrected
1	Stakeholder Summary (Section 3.1)  S1: The <b>customers</b> will create their accounts with the REB+ web application, following which they can log into their accounts and search for homes/properties.  S2: They will work closely with other <b>users</b> and especially customers while understanding system requirements.	Terminology clash	Weak	The term 'customers' are referred as 'users' in the responsibilities of development team. S2 specifies users and the customers again, instead of just customer to be specific.		
2.	Key Stakeholder (Section 3.4) S3: A <b>user-friendly platform</b> with powerful search feature, supported by filters based on popular <b>user</b> criteria like price, number of rooms, area, year built etc.	Designation Clash	Weak	The term user here is not specific. One stakeholder can interpret this as customer friendly, while another stakeholder might interpret it as broker, or system admin		
3	Key Stakeholder (Section 3.4)	Terminology Clash	Weak	The same concept of users		

	<p>S4: REB+ provides an online platform with worldwide reach to potential <b>clients</b>. It allows broker to post customized ads which they can modify anytime</p> <p>S5: <b>Users</b> can directly view broker's updated availability, and book online meetings directly and get it confirmed quickly</p>			are given different names as 'users' and 'clients' in the respective two statements S4 and S5.		
	<p>Other Product Requirement (Section 6)</p> <p>S6: Recovery from failure should mean that <b>user's</b> are able to resume from where they left off. There should be no loss of <b>consumer</b> data.</p>	Terminology Clash	Weak	Again, the concept of potential user have been referred by two terms 'users' and 'consumers'.		
	<p>User Summary (Section 3.2)</p> <p>S7: Once logged in, they can search for residential properties directly and schedule property viewings.</p> <p>Product Features (Section 5)</p> <p>S8: Homebuyers can fix an appointment with the broker.</p>	Structural Clash	Weak	The concept of 'viewing a selected property' is described in different structure in statement S7 and S8. S7 refers it as 'scheduling property viewing' while S8 refers to it as 'fixing an appointment' with the broker.		

**Other comments/recommendations:**

1. The statement "The platform should be scalable, and should be able to handle increasing number of users without any performance degradation." in section 6 is indeed a desirable property, although, it exhibits Strong conflict. The platform should be scalable to accommodate a growing number of users, but ensuring no performance degradation in a distributed system presents a challenge.

## TASK 2 - Task 2 – Documenting conflicts

### Statements

1. S1: The **customers** will create their accounts with the REB+ web application, following which they can log into their accounts and search for homes/properties.
2. S2: They(developer team) will work closely with other **users** and especially customers while understanding system requirements.
3. S3: **A user-friendly platform** with powerful search feature, supported by filters based on popular **user** criteria like price, number of rooms, area, year built etc.
4. S4: REB+ provides an online platform with worldwide reach to potential **clients**. It allows broker to post customized ads which they can modify anytime.
5. S5: **Users** can directly view broker's updated availability, and book online meetings directly and get it confirmed quickly.
6. S6: Recovery from failure should mean that **user's** are able to resume from where they left off. There should be no loss of **consumer** data.
7. S7: Once logged in, they can search for residential properties directly and **schedule property viewings**.
8. S8: Homebuyers can **fix an appointment** with the broker.

Statements	S1	S2	S3	S4	S5	S6	S7	S8	Total
S1	0	0	1000	1	0	0	1000	0	2001
S2	0	0	1000	1	1000	1000	0	0	3001
S3	1000	1000	0	1	1000	0	1000	1	4002
S4	1	1	1	0	1	1	1000	1000	2005
S5	0	1000	1000	1	0	0	0	1	2002
S6	0	1000	0	1	0	0	0	0	1001
S7	1000	0	1000	1000	0	0	0	1000	4000
S8	0	0	1	1000	1	0	1000	0	2002
Total	2001	3001	4002	2005	2002	1001	4000	2002	20,014

### Conflicting pairs of statements

S1-S4, S2-S4, S3-S4, S3-S8, S5-S4, S5-S8, S6-S4,

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### Task 3 – Conflict resolution

The following are the conflicting statements found from Task 2

Statement S1	The customers will create their accounts with the REB+ web application, following which they can log into their accounts and search for homes/properties
Statement S4	REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime
Conflict and Resoultion tactic	The conflict arises between the terms "customers" in S1 and "potential clients" in S4. These terms actually refer to the same user group, which is the audience for the REB+ web application.. We can make term ‘customers’ to be synonymous with the term ‘client’ by using Specializing the Conflict tactic.
<b>Specializing the Conflict</b>	<p>S1: The customers will create their accounts with the REB+ web application, following which they can log into their accounts and search for homes/properties</p> <hr/> <p>S4: REB+ provides an online platform with worldwide reach to <u>potential customers (clients)</u>. It allows broker to post customized ads which they can modify anytime</p>

Statement S2	They(developer team) will work closely with other users and especially customers while understanding system requirements.
Statement S4	REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime
Conflict and Resoultion tactic on both sentences	The conflict arises between the terms “users” in S2 and and potential clients in S4. The developers will work with every user group to ensure requirements are complete and consistent. REB+ is a platform that not only helps potential clients/customers, but also the broker and admins of the organization. <b>We can weaken S2 by broadening the group of users developer will work with.</b>
<b>Weaken Conflicting statements on S2 and S4</b>	<p>S2: The developer team will work closely with users like potential customers (clients),brokers and admins while understanding system requirements.</p> <hr/> <p>S4:: REB+ provides an online platform with worldwide reach to potential customers (clients). It allows broker to post customized ads which they can modify anytime and allow admins to manage user</p>

Statement S3	A user-friendly platform with powerful search feature, supported by filters based on popular user criteria like price, number of rooms, area, year built etc.
Statement S4	REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime
Conflict and Resoultion	We have to use <b>restore conflicting statement</b> . S3 specify how the platform is easy for the customers with search features. However, the phrase ‘worldwide

tactic on both sentences	reach' doesn't imply explicitly if it will be user-friendly for the brokers too. (Again, terms user and clients conflict but they are considered to be resolved in the aforementioned conflict resolution).
<b>Restore Conflicting statements</b> on S3 and S4	<p>S3: A user-friendly platform with powerful search features <u>for customers</u>, supported by filters based on popular customer criteria like price, number of rooms, area, year built etc, <u>along with worldwide reach capability for brokers to attract suitable customers</u>.</p> <hr/> <p>S2: REB+ provides a <u>user-friendly online platform with worldwide reach to potential customers (clients)</u>. It allows broker to post customized ads which they can modify anytime</p>

Statement S3	A user-friendly platform with powerful search feature, supported by filters based on popular user criteria like price, number of rooms, area, year built etc.
Statement S8	Homebuyers can fix an appointment with the broker.
Conflict and Resoultion tactic on both sentences	We have to use <b>restore conflicting statement</b> and reframe S8 in way that it is consistent with the terminology used for user group "customers". We will also apply the same tactic on S3 like mentioned in the previous table.
<b>Restore Conflicting statements</b> on S3 and S8	<p>S3: A user-friendly platform with powerful search features <u>for customers</u>, supported by filters based on popular customer criteria like price, number of rooms, area, year built etc, <u>along with worldwide reach capability for brokers to attract suitable customers</u>.</p> <hr/> <p>S8: <u>Customers</u> can fix an appointment with the broker</p>

Statement S5	Users can directly view broker's updated availability, and book online meetings directly and get it confirmed quickly..
Statement S4	REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime.
Conflict and Resoultion tactic on both sentences	There is a conflict between S4 and S5 since both statements use different terms to refer to the same user group. S4 uses the term "potential clients," while S5 uses the term "users". S5 specifically means customers or potential clients, and not any users.
<b>Specialize conflict source or target</b> on S5	<p>S5: <u>Potential customers (clients)</u> can directly view broker's updated availability, and book online meetings directly and get it confirmed quickly</p> <hr/> <p>S4: REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime.</p>

Statement S5	Users can directly view broker's updated availability, and book online meetings
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	directly and get it confirmed quickly.
Statement S8	Homebuyers can fix an appointment with the broker.
Conflict and Resoultion tactic on both sentences	There could be a potential conflict if the process of fixing appointments is not consistent between the two statements. S5 suggest online appointment, and S8 doesn't clarify if fixing appointment is through call, online or any other method. We need to use specialize conflict source or target on them.
<b>Specialize conflict source or target.</b> on S5 and S8	<u>Customers (clients/homebuyers) can directly vie wbroker's updated availability, and book online meetings directly and get it confirmed quickly.</u> Homebuyers can fix an appointment online or through call with the broker.

Statement S6	Recovery from failure should mean that user's are able to resume from where they left off. There should be no loss of consumer data.
Statement S4	REB+ provides an online platform with worldwide reach to potential clients. It allows broker to post customized ads which they can modify anytime.
Conflict and Resoultion tactic on both sentences	The recovery process can affect the condition of 'modifying customized ads <b>anytime</b> ' as data cannot be manipulated when the system is down. We have to use Avoid boundary condition to resolve them. We can avoid the boundary condition by making it explicit that modifying data involves being logged in. Users will be logged out in case of server crash.
<b>Avoid boundary condition.</b> On S4	Recovery from failute should mean that users are able to resume from where they left off. There should be no loss of consumer data. <u>REB+ provides an online platform with worldwide read to potential clients. It allows broker to post customized ads which they can modify anytime when they are logged in.</u>

#### Task 4 – Conflict evaluation

We will be using weighted matrix to consider alternative options for identified conflicts

$$totalScore(opt) = \sum_{crit} (Scores(opt, crit) \times Weight(crit))$$

**Alternative Option 1:** The customers will create their accounts with the REB+ web application, following which they can log into their accounts and search for homes/properties

**Alternative Option 2:** REB+ provides an online platform with worldwide reach to potential customers (clients). It allows broker to post customized ads which they can modify anytime

		Options Score	
Evaluation Criteria NFR	Significance Weighting	Alternative Option 1	Alternative Option 2
User-friendly interface	0.3	0.8	0.8
Global reach	0.3	0.3	0.9
Reliability	0.4	0.7	0.7
<b>Total</b>	1.0	0.61	<b>0.79</b>

Hence Alternative option 2 will be selected to solve the conflict

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**Alternative Option 1:** The developer team will work closely with users like potential customers (clients),brokers and admins while understanding system requirements.

**Alternative Option 2:** REB+ provides an online platform with worldwide reach to potential customers (clients). It allows broker to post customized ads which they can modify anytime and allow admins to manage users

		Options Score	
Evaluation Criteria NFR	Significance Weighting	Alternative Option 1	Alternative Option 2
User engagment and collaboration	0.4	1.0	0.7
Global reach	0.3	0.2	0.9
Customization	0.2	0.7	0.9
Data security	0.1	0.4	0.7
Total	1.0	0.64	<b>0.8</b>

Hence alternative option 2 will be selected to solve the conflict.



Alternative Option 1: A user-friendly platform with powerful search features for customers, supported by filters based on popular customer criteria like price, number of rooms, area, year built etc, along with worldwide reach capability for brokers to attract suitable customers.

Alternative Option 2: REB+ provides a user-friendly online platform with worldwide reach to potential customers (clients). It allows broker to post customized ads which they can modify anytime

		Options Score	
Evaluation Criteria NFR	Significance Weighting	Alternative Option 1	Alternative Option 2
User-friendly interface for all users	0.3	0.7	0.7
Extensive search filter for customers	0.2	1.0	0.3
Global customer reach for brokers	0.2	0.1	0.8
Searching efficiency	0.3	0.9	0.7
Total		<b>0.7</b>	0.64

Hence selecting Alternative Option 1 for resolving the conflict