HIGH-LEVEL REQUIREMENTS DOCUMENT

EXECUTIVE SUMMARY

XXXX has commissioned a project for the establishment of a digital platform that serves as a trustworthy, reliable and seamless agent for facilitating the transfer of real estate ownership from one customer to another. The platform will serve as a comprehensive real estate agent, facilitating property transfers and rental agreements. It will include web and mobile channels for customers and an employee portal for platform personnel. The following summarizes the scope at a high-level.

Personas

The platform will serve the following personas:

#	Type	Persona / Roles	Remarks
1	Employees	- Admin (Security) - Operations - Marketing & Sales	The platform should be built taking into consideration that there is no other medium through which the business will function / serve / fulfill requests except through the platform.
2	Customers	- Buyer / Renter - Seller / Lessor	The customer-facing website/portal and mobile app is catering for customers only who have one of two main purposes to fulfill: - Buying / Renting a property - Selling / Leasing a property for rent
3	Partners	- Value-added Service Providers	This will include add-on service providers the platform will cross-sell services relating to real-estate (e.g. real-estate appraiser service). The platform company will establish relationships with trusted third-parties of whom the platform will cross-sell services for and thus earning additional revenues. Model to be defined during the analysis phase.

Channels

The platform will deliver services via the following touchpoints:

#	Channel	User Access	Remarks
1	**Website / Portal eServices**	Customers	This is a single web-based channel that applies responsive design and has two modes for the interface: 1. **Public** interface that primarily focuses on the user being able to do anything that does not require a secure session. 2. **Private** interface that focuses on users being able to conduct journeys that require a secure login. Browsers: Should support all ever-green browsers.
2	**Mobile App**	Customers	This is a single mobile app-based channel that has two modes for the interface: 1. **Public** interface that primarily focuses on the user being able to do anything that does not require a secure session. 2. **Private** interface that focuses on users being able to conduct journeys that require a secure login. OS: Should support Android & iOS.
3	**Staff Portal**	Employees	This is a single web-based channel that applies responsive design and has one mode for the

			interface:
			1. **Private** interface that focuses on users being able to conduct journeys that require a secure login.
			Browsers: Should support all ever-green browsers.

Key Integrations

Though this is not a definitive set of integration endpoints / parties

#	Integration Party	Purpose	Remarks
1	**Nafath / ELM**	Customer authentication & verification (IAM)	Appropriate service to be selected based on best fit.
2	**RER (Real estate registry)**	Deed Registration & Historical Property Records	Not confirmed yet, to be assessed and qualified with RER as to whether they can meet this requirement via integration.
3	**Neoleap (urpay)**	Payment Gateway	Not confirmed yet, to be assessed and qualified as to whether their payment gateway is the right fit from capability and pricing.
4	**Ejar**	Rental Agreements	Not confirmed yet, to be assessed and qualified with Ejar / Real Estate General Authority as to whether they can meet this requirement via integration.
5	**Alrajhi Bank**	Escrow Account	Not confirmed yet, to be assessed and qualified with ARB as to whether they can meet this requirement via integration.

Project Overview

The Real Estate Platform, initiated by [XXXX], aims to revolutionize property transactions in Saudi Arabia by providing a seamless digital experience for buying, selling, and renting properties.

Objectives

- Enable customers to transfer ownership of homes through secure and user-friendly digital sales journeys.
- Provide a comprehensive platform for buying, selling, and renting properties, enhancing accessibility for users across Saudi Arabia.
- Establish [XXXX] as the leading digital solution in the Saudi Arabian real estate market.

Platform Audience

- Customers seeking to buy, sell, or rent properties in Saudi Arabia.
- Employees involved in platform operations, including customer support, listings management, and transaction processing.

Market Context

The platform will operate in the growing real estate market of Saudi Arabia, catering to local preferences and ensuring compliance with local regulations. Future expansion into other geographies might be considered for technical design & scalability but not required for current scope features.

Competitor Analysis

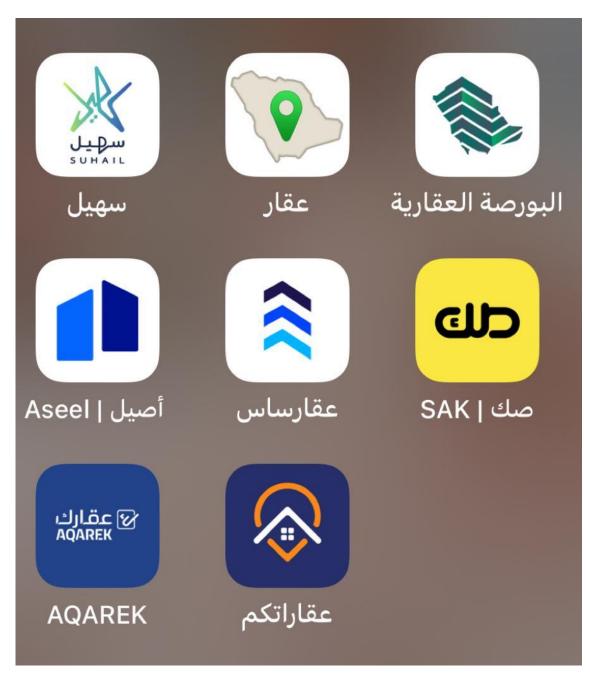Certainly! For a comprehensive competitor analysis in the context of a real estate platform targeting the Kingdom of Saudi Arabia (KSA), we need to consider both local and international players. Below is an in-depth analysis:

Local Competitors (KSA)

Competitor	Strengths	Weaknesses	Opportunities
Aqarmap	- Leading in KSA	- Potential UI/UX challenges	- Localization for Saudi market

| Haraj | - Well-known classifieds | - May lack advanced features | - Enhanced property management tools |
| Sakani | - Government-backed | - Limited to government initiatives | - Collaboration for wider market coverage |

Other apps to look into:

International Players

Competitor	Strengths	Weaknesses	Opportunities
Zillow (USA)	- Global leader	- Lack of localized features	- Adaptation to Saudi market
Realtor.com (USA)	- Extensive listings	- Limited coverage internationally	- Collaboration with local agencies
Rightmove (UK)	- Leading in the UK	- Lack of Saudi-specific features	- Adaptation to local market

Comparison & Opportunities

Opportunities	Local Competitors	International Competitors	Common Opportunities
Leverage Local Knowledge	- Strong understanding of local market	- Adapt global features to Saudi market	- Implement localized features
Enhance User Experience	- Opportunity to improve UI/UX	- Adapt features for Saudi preferences	- Implement cutting-edge technologies
Government Collaboration	- Collaboration with government initiatives	- Explore partnerships with local entities	- Align with local initiatives
Adapt Global Features	- Opportunity to adopt international best practices	- Localization for Saudi market	- Technology integration
Coverage Expansion	- Opportunity to expand coverage in collaboration with local agencies	- Collaborate with local real estate agencies	- Explore partnerships for wider market

Threats	Common Threats
Regulatory Challenges	- Adapting to and complying with local real estate regulations
Cultural Sensitivity	- Understanding and respecting cultural nuances in property transactions

In conclusion, a successful real estate platform in KSA should strike a balance between leveraging the strengths of local competitors and adopting the best practices from international players. Tailoring features to suit the Saudi market, while incorporating global innovations, will be key to gaining a competitive edge.

High-level Business Requirements

Though these requirements are defined, they represent - at a high level - the desired outcomes of the platform. More detailed analysis and requirements definition is expected to take place during the project for further development.

Note: In general all customer-facing features should be applied to both web and mobile apps.

General Public (i.e. does not require secure session)

The following requirements depict - at a high level - the requirements for the website from a visitor's perspective. There may be overlap in functionality between a public visitor and a logged in user.

Category	Requirement	Description/Details
Homepage	Search Bar	Provide a prominent search bar for users to initiate property searches without logging in.
	Featured Listings	Display curated or popular property listings on the homepage for public viewing.
	Trending Locations	Showcase trending or popular locations to guide users in their property search.

Property Listings	Property Details	Allow users to view detailed information about a property, including images, specifications, and contact details.
	Advanced Filters	Implement filters for refining property searches based on location, type, price range, and other criteria.
	Map View	Enable a map view for users to explore properties visually without requiring login.
Virtual Tours	Virtual Tours	Allow public users to access virtual tours or video walkthroughs of select properties.
Educational Content	Real Estate Guides	Provide publicly accessible guides and articles on real estate topics, market trends, and buying/selling tips.
Contact Form	Inquiry Form	Include a contact form for users to inquire about properties or seek general information without logging in.
Social Media Integration	Share Buttons	Integrate social media sharing buttons to allow users to share property listings on external platforms.
Language Options	Multilingual Support	Offer language options for the website to cater to a diverse audience (i.e. English & Arabic).
Notification Alerts	Price Alerts	Allow users to set price alerts for specific properties without requiring account creation. To check feasibility during the analysis phase.
User Engagement	Newsletter Subscription	Provide an option for users to subscribe to newsletters for updates, market insights, and new property listings.
Mobile Responsiveness	Responsive Design	Ensure the platform is fully responsive for optimal viewing on various devices.

Buyer / Renter

The following requirements depict - at a high level - the requirements for the eServices Portal from a buyer/renter perspective.

Category	Requirement	Description/Details
User Registration and Profiles	Create User Account	Allow users to register with a valid email address or through social media credentials. More importantly account creation should leverage a trusted service such as IAM from a service provider.
	Contact Verification	Implement a verification process (email confirmation, SMS code) to ensure the legitimacy of user accounts.
	Profile Customization	Enable users to personalize profiles with profile pictures, contact information, and property preferences for anything additional to the info retrieved from the IAM service provider.
	Preferences Management	Allow users to manage preferences for property types, locations, and other relevant criteria.
	Saved Searches	Implement a feature for users to save specific search criteria for quick access and updates.
Property Listings	Advanced Search	Develop filters for advanced property searches based on location, property type, price range, number of bedrooms, etc.
	Map Integration	Integrate maps with location pins for users to visually explore properties and neighborhoods.
	Saved Listings	Allow users to save and organize favorite listings into personalized folders.
	Notification Alerts	Provide an option for users to receive real-time notifications on new listings or updates related to saved searches.

Buying and Renting Process	Inquiry Mechanism	Include a "Contact Seller / Lessor" or "Inquire" button on property listings for users to express interest.
	Virtual Tours	Integrate 360-degree virtual tours or video walkthroughs for select properties to enhance user experience.
	Offer Submission	Enable users to submit purchase offers or rental applications directly through the platform.
	Closing Guidance	Provide informational content and resources to guide users through the closing process, including legal and financial considerations.
Bidding Process	Auction Integration	Integrate an auction feature allowing buyers to participate in property auctions.
	Bid Placement	Enable buyers to place bids on properties they are interested in purchasing.
	Bid Notifications	Send real-time notifications to buyers on competing bids, status changes, and auction results.
	Bid History	Provide a transparent bid history for each property, displaying previous bids and winning bid amounts.
	Auto Bidding	Implement an auto-bidding feature allowing buyers to set a maximum bid, with the system automatically placing incremental bids on their behalf.
User Interaction	Messaging System	Implement a secure messaging system for communication between users within the platform.
	Reviews and Ratings	Allow users to leave reviews and ratings for properties, users, and the overall platform.
	Social Sharing	Include options for users to share listings on popular social media platforms directly from the platform.

Mobile Application	Mobile-first Design	Ensure an optimal design for seamless user experience on both Android and iOS devices.
	Push Notifications	Implement push notifications for new listings, saved search updates, and messages.
	Offline Mode	Provide basic functionalities in offline mode, allowing users to access saved information without an internet connection.
Customer Support	Help Center	Develop a comprehensive help center with FAQs, guides, and troubleshooting tips.
	Chat Support	Implement real-time chat support for immediate assistance with inquiries.
	Reporting Mechanism	Include a user-friendly system for users to report issues, inappropriate content, or scams.
Value-Added Services	Partner Services	Services resold by the platform from verified partners will be availed for buyers / renters. Services such as: - Property Valuation Services

Sellers / Lessors

The following requirements depict - at a high level - the requirements for the eServices Portal from a seller/lessor perspective.

Category	Requirement	Description/Details
Property Management	Listing Creation	Allow sellers/lessors to create detailed property listings with high-quality images and accurate descriptions.
	Listing Editing	Provide tools for users to easily edit and update their property listings.
	Property Ads / Featuring of Property	Provide tools for enabling sellers of properties to feature a property for a fee. Featuring a property would give higher rank or a more

		prominent display of their property above others which are "not featured".
	Property Analytics	Offer insights into listing performance, views, and user interactions through an analytics dashboard.
Interaction with Buyers / Renters	Inquiry Management	Create a centralized inbox for managing and responding to inquiries from potential buyers or renters.
	Offer Management	Provide a system for managing and responding to purchase offers or rental applications.
	Showing Requests	Allow sellers/lessors to manage and schedule property showings and tours.
Auction Managemer	Listing Management	Allow sellers to create listings specifically for auctioning properties.
	Reserve Price Setting	Enable sellers to set a reserve price for auctions, ensuring the property will not be sold below a specified minimum amount.
Bidding Managemer	Bid Review	Provide a dashboard for sellers to review and manage incoming bids on their properties.
	Accept / Reject Bids	Allow sellers to accept or reject bids based on their preferences and property requirements.
	Counteroffers	Implement a feature allowing sellers to make counteroffers to buyers who have placed bids.
	Bidder Communicatio n	Facilitate secure communication between sellers and bidders to negotiate terms and conditions.
Transaction Management	Escrow Integration	Integrate an escrow service for secure management of funds during the bidding process.
	Closing Procedures	Provide guidance and tools for sellers to navigate the closing procedures after the bidding process is successfully completed.

Mobile Application	Listing Management	Enable sellers/lessors to manage their listings conveniently through the mobile app.
	Notifications	Send push notifications for inquiries, offers, and updates on property listings.
	Virtual Tour Creation	Allow sellers/lessors to create virtual tours or upload video walkthroughs for their listings.
Financial Transactions	Payment Integration	Integrate a secure payment gateway for transaction processing, subscription services, and premium listings.
	Commission Tracking	Implement a system for tracking and managing commission payments for successful transactions.
	Invoicing	Provide automated invoicing tools for subscription fees, featured listings, or other premium services.
Value-Added Service	Partner Services	Services resold by the platform from verified partners will be availed for sellers / lessors to acquire. Services such as: - Property Surveyor - Property Photographers

Staff Portal

The following requirements depict - at a high level - the requirements for the staff portal.

Category	Requirement	Description/Details
Administrator Tools	User Management	Develop tools for creating, editing, and deleting user accounts with role-based access control.
	Permissions Management	Implement a system for assigning specific permissions to different user roles (admin, moderator, customer support).

	Listings Moderation	Provide tools for moderating and verifying property listings to ensure accuracy and compliance.
	Property Ads / Featuring of Property	Provide tools for enabling admin to feature a property. Featuring a property would give higher rank or a more prominent display of their property above others which are "not featured".
	Analytics Dashboard	Develop a comprehensive analytics dashboard for monitoring platform performance, user behavior, and listing popularity.
	Content Management	A feature for the creation / modification / deletion of content to be displayed on the platform's channels (i.e. public site / eServices Portal / Mobile app). Content in English & Arabic should be supported for easy modification. Content relating to: • Pages • Banners • Links • Etc...
Employee Portal	Operational Dashboard	Create a centralized dashboard for employees to manage listings, inquiries, transactions, and customer support.
	Reporting System	Implement a reporting system for employees to address issues flagged by users and take necessary actions.
	Customer Support Tools	Equip employees with tools for efficient customer support, including response templates and user history.
Integration with External Services	Payment Integration	Integrate with a secure payment gateway for transaction processing, subscription services, and premium features.

	Social Media Integration	Integrate social media sharing features and analytics tools to monitor platform visibility and engagement.
Value-Added Servi	Partner Listing	Staff will be able to create / edit partner profiles and their associated services for display on customer channels.
	Partner Services	Staff will be able to add / edit partner service details for display on customer channels. <mark>Further analysis is required.</mark>
Security and Compliance	Data Encryption	Ensure end-to-end encryption for user data, financial transactions, and sensitive information.
	Compliance Checks	Implement automated checks to ensure compliance with real estate laws, data protection regulations, and platform policies.
	Authentication Tools	Employ secure user authentication mechanisms, including multi-factor authentication for admin accounts.
	OWASP Guidelines	Ensure the platform is OWASP compliant.

High-level Technical Requirements

General

The following technical requirements should be taken into consideration when designing and implementing the solution.

Category	Requirement	Description/Details
Tech Stack	Frontend Framework	Utilize ReactJS for web portal development to ensure a responsive and dynamic user interface.
	Mobile App Framework	Implement React Native for the mobile app, allowing code sharing between web and mobile platforms.

	Backend Development	Choose a robust backend framework (e.g., Node.js, Django) for efficient server-side logic and data management.
	Database	Employ a scalable and relational database (e.g., PostgreSQL, MySQL) for efficient data storage and retrieval.
	API Integration	Utilize RESTful APIs or GraphQL for seamless communication between frontend and backend components.
Cloud Infrastructure	Cloud Service Provider	Host the platform on a scalable cloud infrastructure, preferably a provider with a data center in Saudi Arabia (e.g., AWS, Azure, STC Cloud).
	Scalability	Design the architecture to be scalable, allowing for increased server capacity during peak times or as user demand grows.
	Data Security	Implement robust data encryption and access control mechanisms to ensure the security and privacy of user data.
Mobile App Shielding	Code Obfuscation	Apply code obfuscation techniques to protect the mobile app's source code from reverse engineering.
	App Hardening	Employ app hardening measures to prevent tampering, such as jailbreak/root detection and anti-debugging mechanisms.
	Secure Data Storage	Implement secure storage mechanisms for sensitive data on mobile devices, including encryption of local data.
Non-functional Requirements	Performance	Ensure low-latency interactions, with page load times and API responses optimized for a smooth user experience.
	Availability	Aim for high availability with minimal downtime, achieved through redundant server setups and automated failover mechanisms.

	Reliability	Build a reliable system with robust error handling and recovery mechanisms to minimize service disruptions.
	Scalability	Design the platform to handle a growing user base and increased data volume efficiently.
	Usability	Prioritize a user-friendly design with intuitive navigation and accessibility features for a diverse user base.
	Compliance	Adhere to relevant data protection and privacy regulations, ensuring compliance with Saudi Arabian legal requirements.
	Backup and Recovery	Implement regular data backups and establish a comprehensive disaster recovery plan to mitigate data loss risks.

Project Milestones & Activities

The following are high-level and indicative activities & milestones that are expected to occur during the project.

Milestone/Activity	Description	Owner
1. Project Initiation	Define project scope, goals, and initial requirements.	Founders
2. Requirements Gathering	Detailed documentation of functional and non-functional requirements.	Founders, Implementation Partner
3. Tech Stack Selection	Choose the technology stack for frontend, backend, and database.	Founders, Implementation Partner
4. UI/UX Design	Designing the touchpoints while reflecting branding guidelines.	Implementation Partner
5. UI/UX Design Approval	Review and approve the design mockups and UI/UX elements.	Founders

Task	Description	Owner
6. Cloud Infrastructure Setup	Implement and configure scalable cloud infrastructure.	Implementation Partner
7. Mobile App Shielding Implementation	Implement security measures for the mobile app.	Implementation Partner
8. Technical Architecture Approval	Review and approve the overall technical architecture.	Founders
9. Security and Privacy Review	Ensure compliance with security and privacy requirements.	Founders
10. UI/UX Implementation	Develop and implement the approved UI/UX design.	Implementation Partner
11. Bidding Features Development	Implement features related to property bidding.	Implementation Partner
12. Testing and Quality Assurance	Conduct testing, including unit testing, integration testing, and UAT.	Implementation Partner
13. Deployment to Production	Roll out the platform to the production environment.	Implementation Partner
14. Monitor System Performance	Ensure ongoing monitoring of system performance and stability.	Implementation Partner
15. Compliance Review	Periodic reviews to ensure ongoing compliance with regulations.	Founders
16. Backup and Recovery Testing	Regular testing of backup and recovery procedures.	Implementation Partner
17. Scalability Assessment	Assess and optimize platform scalability based on user growth.	Implementation Partner
18. User Training and Onboarding	Develop and deliver user training materials.	Implementation Partner, Founders
19. Documentation Update	Regularly update project documentation as features evolve.	Implementation Partner

20. Future Features Implementation	Roll out planned future features as per the roadmap.	Implementation Partner
21. Project Closure	Evaluate project success, lessons learned, and final documentation.	Founders, Implementation Partner

Key

- **Founders**: Key stakeholders representing the real estate platform.
- **Implementation Partner**: The external implementation partner responsible for development and technical aspects.