



KHIPU COIN

// PRODUCT DISCOVERY

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OBJECTIVE

The Khipu network has the objective of becoming the principal decentralized global tourism platform.

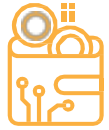
In its first stage, it will provide a platform for peer-to-peer rentals where distinct lodgings will be listed and efficient means of payment will be created for travellers to use during their stays.



INTRODUCTION

Currently, with the help of new technologies, new forms of money have appeared, that companies and individuals now accept as valid means of exchange.

This has been the case with currencies like **Bitcoin**, a type of cryptocurrency born in 2009 and which gave rise to other cryptocurrencies. ***But what are cryptocurrencies and how do they work?***



CRYPTOCURRENCIES

What do they consist of?

Cryptocurrencies are a type of *digital* money that uses digital encryption in its operations, such as transfers of money or payment for a particular product or service. In contrast with traditional currencies, this type of money only exists online, and its generation and storage is purely digital.

Cryptocurrencies are able to be used in whichever part of the world, whenever the buyer and seller agree on its use. This premise is fundamental, that if nobody accepts it as a means of exchange, it has no value. As happened in antiquity with other currencies, such as gold, when more of the population uses it, its value as a medium of exchange increases. At the same time, if these currencies lose the confidence of their users, they are able to disappear.

WHY USE BLOCKCHAIN?

It is proposed to use Blockchain technology because:

- ✔ Lends transparency and immutability to information.

When there is a transfer of value between two parties, it is important that there does not exist the possibility of altering this information and that in turn the network validates the transfer.

- ✔ It allows payment mechanisms and transfers of value without intermediaries.

Until today, a transfer of value relies on an intermediary, whether that is a bank or another external agent. To pay for a service using the blockchain, payments are made peer-to-peer with the network and all involved parties acting as witnesses to the transaction.

ADVANTAGES OF BLOCKCHAIN TECHNOLOGY

✔ Permits the Implementation of Smart Contracts

Until now, contracts have been verbal or expensive written documents, subject to laws and territorial jurisdictions, and which on occasion require notaries, which is to say, more cost and time. Contracts are not accessible to everyone, and worse, the content of contracts is subject to interpretation.

In contrast, a smart contract is capable of executing and complying with its contents on its own, autonomously and automatically, with intermediaries or mediators. They avoid the burden of interpretation by not being written in the languages that we speak. Smart contracts are software programs, following purely their computer codes and programming. On the other hand, a smart contract can be created and called upon not only by people and legal entities, but also by machines and other programs that work autonomously.

A smart contract has validity without depending on authorities due to its nature, which is code, visible for all to see and unchangeable through its existence on blockchain technology, with its decentralization, immutability and transparency.

WHY USE SMART CONTRACTS?

The use of smart contracts brings great value to the Khipu network by allowing:

- ✔ The implementation of the cryptocurrency Khipu, the principal motor of the platform.
- ✔ The development of applications within the Khipu network, which is essential to build a tourism community:
 - Smart rental contracts with clauses, conditions of use and payment.
 - A decentralized and transparent system of reputation management.



KHIPU NETWORK

Interact with the blockchain by:

- ✓ The definition of the Khipu Coin (KP\$), a digital asset that acts as a medium of exchange in order to make payments.
- ✓ The use of Smart Contracts to control, follow and represent the flow of rentals.



KHIPU COIN

How to obtain it?

The Khipu Coin, as a digital money, cannot be purchased and stored outside of the Internet, and as such it required a digital portfolio in which we can store our credit. This portfolio, commonly known as a “wallet” can be carried on a flash drive or stored in the cloud.

One is able to acquire Khipu Coin buying it from people or businesses that have it, or through known exchanges, platforms that act in a form analogous to currency exchange houses, but whose presence is only on the Internet.



BLOCKCHAIN SOLUTION

Selection of Technology

As discussed in previous sections, the objective of Khipu is completely linked to social innovation. There are many challenges to solve so it is proposed to opt for a path that will minimize the risks in regards to technology.

It is understood that the key factor of the Khipu Network is that it will be extremely **predictable, reliable and** secure allowing its users to have peace of mind when using it. By this we mean they can have confidence both in their history and data stored to the blockchain as well as the storage of the Khipu Coin.



BLOCKCHAIN SOLUTION

KHIPU COIN

An Ethereum-compatible blockchain solution will be used.

With this we will be able to execute Smart Contracts coded in the Solidity programming language.

- Maturity of the technology
- Availability of libraries, documentation and community.
- Ease in finding developers, support and auditing services.
- Public network with Proof of Authority

MECHANISMS OF CONSENSUS

Blockchains are distributed databases (belonging to a network) that contain information replicated, immutable and transparent for all actors that take part in that same network. In order to write information into the network, the users should send transactions. These are received by special nodes (block producers or miners) whose work is to group these transactions in blocks and add them to the history of changes.

The systems based on blockchain, whose characteristic of decentralization, conform to a complex computer network in which there does not exist any central server that has control of the data. This transforms it into a system resistant to failures and malicious modifications, but which also ensures it needs special mechanisms so that all of the nodes that participate in the network can reach an agreement (consensus) on the information that remains. There exist distinct mechanisms between which we are able to find:

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TO THE NEXT
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MECHANISMS OF CONSENSUS

✔ Proof Of Work (PoW):

By definition to be able to write information (blocks) within the blockchain, all of the nodes (miners) should consume a large quantity of energy in solving mathematical computations. All of the network will verify, before adding a block to the blockchain, that the solution is correct, discarding those that are not. In this manner, each block has thousands of miners competing to be the first to find the correct result. As soon as a miner correctly solves a computation and the other miners validate it, they all discard their current blocks and begin competing to calculate the next block of transactions. It is important to note that the winner will receive compensation in tokens from within the network.

PoW is a very simple mechanism of consensus, but it is the slowest, and requires great expenses on hardware and energy, and it must be very careful about network concentration as it only works when more than 50% of the network has incentives to operate correctly.

✔ Proof Of Authority (PoA):

In this network, the producers of blocks are specially designated prohibiting the production of blocks by those not selected. In this manner, network security, speed and confidence is secured, relegating decentralization in the generation of blocks (the database remains distributed among all of the participants in the network).

KHIPU IMPLEMENTATION

PUBLIC NETWORK WITH PROOF OF AUTHORITY

- ✔ A public network will be established and controlled by Khipu with the objective of avoiding Establecer una red pública controlada por Khipu con el objetivo de poder evitar la unpredictability of fees, managing the access and speed of the production of the blocks within this same network, giving greater stability and response time to the users.
- ✔ With objective of increasing the security and transparency of the network, periodically information of Khipu's blockchain will be written into the mainnet of some other blockchain (a process called Blockchain Anchoring). **Ethereum, Ethereum Classic o RSK** may be considered.
- ✔ There will be at least **two block producing** nodes that will allow for greater redundancy and stability, allowing the blockchain to grow even when a producing node has lost some eventuality.
- ✔ In a future stage, other actors can become involved, such as **ministries of tourism, state and provincial level governments, and cities**, or whatever reliable entity in society has an interest in viewing the data on tourism circulation generated by Khipu. These organisms will support a degree of decentralization in conjunction with the block producers. This will permit people to have confidence in the Khipu network, as these entities with established reputations will be working in the generation of blocks. It will be possible to use the platform as a tool for the attraction of visitors (for example, offering promotions for museum tickets) using the Khipu Coin.

KHIPU IMPLEMENTATION

A PUBLIC NETWORK WITH PROOF OF AUTHORITY

- ✓ Any user will be able to connect to the network and download all of the network history. This will give greater assurance and increase the redundancy of the data.
- ✓ The users will be provided with a blockchain browser that will allow them at all times to consult their balance in the blockchain (including transaction ID, block hash, etc.), and also information relative to the anchoring.
- ✓ In the long term there will be a desire to commercially offer a cryptocurrency on public exchanges, and to simplify this integration, Entendiendo a largo plazo se desea poder comerciar una criptomoneda en exchanges públicos, para hacer más sencilla la integración con los mismos, the following plan is proposed to be implemented in future stages of the project and to allow the Khipu Coin to be used as a medium of exchange:

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PRÓXIMA PÁG

- Create a token on the mainnet de ETH, ETC or RSK in equal quantities of the cryptocurrencies emitted on the Khipu network.
- Create a process of automatic transformation of Khipu Coins of both networks following a similar process (subject to modifications) as follows:

KHIPU IMPLEMENTATION

PUBLIC NETWORK WITH PROOF OF AUTHORITY

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HERE

1. A user in the Khipu network will want to be able to sell his or her KP\$ on an exchange.
2. The user will be sent a special address (bridge address) within the Khipu network.
3. The process will be monitored for transaction types that, each at a certain time, will validate the reception of said amounts and the generation and transfer of the same quantity of tokens within the mainnet of the emitters. Different types of heuristics will be applied to optimize the fees on the mainnet (batching, for example). As well, fees will be charged to users (in tokens).
4. Once users obtain tokens in the mainnet, they can dispose of the tokens as they like, buying and selling them on the mainnet and paying applicable fees.
5. When it is desired to operate again within the Khipu Network, the reverse operation can be performed.

KHIPU IMPLEMENTATION

PUBLIC NETWORK WITH PROOF OF AUTHORITY

☑ The business of Khipu Coin will be able to:

- Create new nodes (producers of blocks);
- Authorize third parties to act as nodes (miners or public entities);
- Create new applications (Khipu Hotel, Khipu Rent a Car, etc.);
- Create new Smart Contracts;
- Autorizar third parties to create new Smart Contracts;
- Create new cryptocurrencies;
- Authorize third parties to create new cryptocurrencies.

KHIPU COIN

The Khipu Coin should be implemented following a Smart Contract compatible with the ERC20 standard. This standard is widely adopted, defining a common interface and behavior for the representation of Smart Contracts. Among the benefits of using this standard are the following advantages:

- There exists significant information, libraries and distinct implementations of this standard. In this manner the risks and costs of implementation and auditing are decreased.
- There exists documentation and wallets compatible with this standard and these can be counted on a base of material for development.
- As the standard used by industry, exchanges, websites and wallets it will be possible to interact with them in their native format.

The token will be implemented with the following characteristics:

- To follow the ERC20 standard. It also should consider compatibility with ERC223 (it will improve its standard to avoid errors in its use). At the moment of implementation it should be considered as another alternative.
- To be able to be paused to stop the circulation before some eventuality.

KHIPU COIN

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- To count with a representation of two decimal places to simplify the system by seeming similar to that used by FIAT currencies.
- To possess N administrator users (modifiable) that are able to modify any of the parameters of the system.
- To leave the registry (Logs) of all operations that are realized on the network in order to facilitate the integration of Decentralized Applications and Browsers.
- Updates must be conducted following one of the following standard protocols used in the industry (Proxy Contracts, Data Storage Splitting).
- Commentaries and automated tests will ensure full coverage of the same code, making use of Open Source libraries like Zeppelin².

¹ <https://github.com/ethereum/EIPs/blob/master/EIPS/eip-20.md>

² <https://openzeppelin.org/>

DEVELOPMENT PLAN

TEAM & PHASES



TEAM

- ✓ 1 UX Designer
- ✓ 1 Blockchain Developer 1
- ✓ Full Stack Developer 1
- ✓ Project Manager
- ✓ 1 Tester



PHASES

- ✓ **Phase 1_ Testnet (1 - 2 months)**
 - The Khipu Network will function in a test environment.
 - The Smart Contract of the Khipu Coin will be made ready for use.
 - Tools for monitoring and browsing the Khipu Network will be functioning.
- ✓ **Phase 2 _ p2p Rentals (4 - 6 months)**
 - The first version of the rental site for p2p rentals will be used on the testnet.
- ✓ **Phase 3 _ Start production**



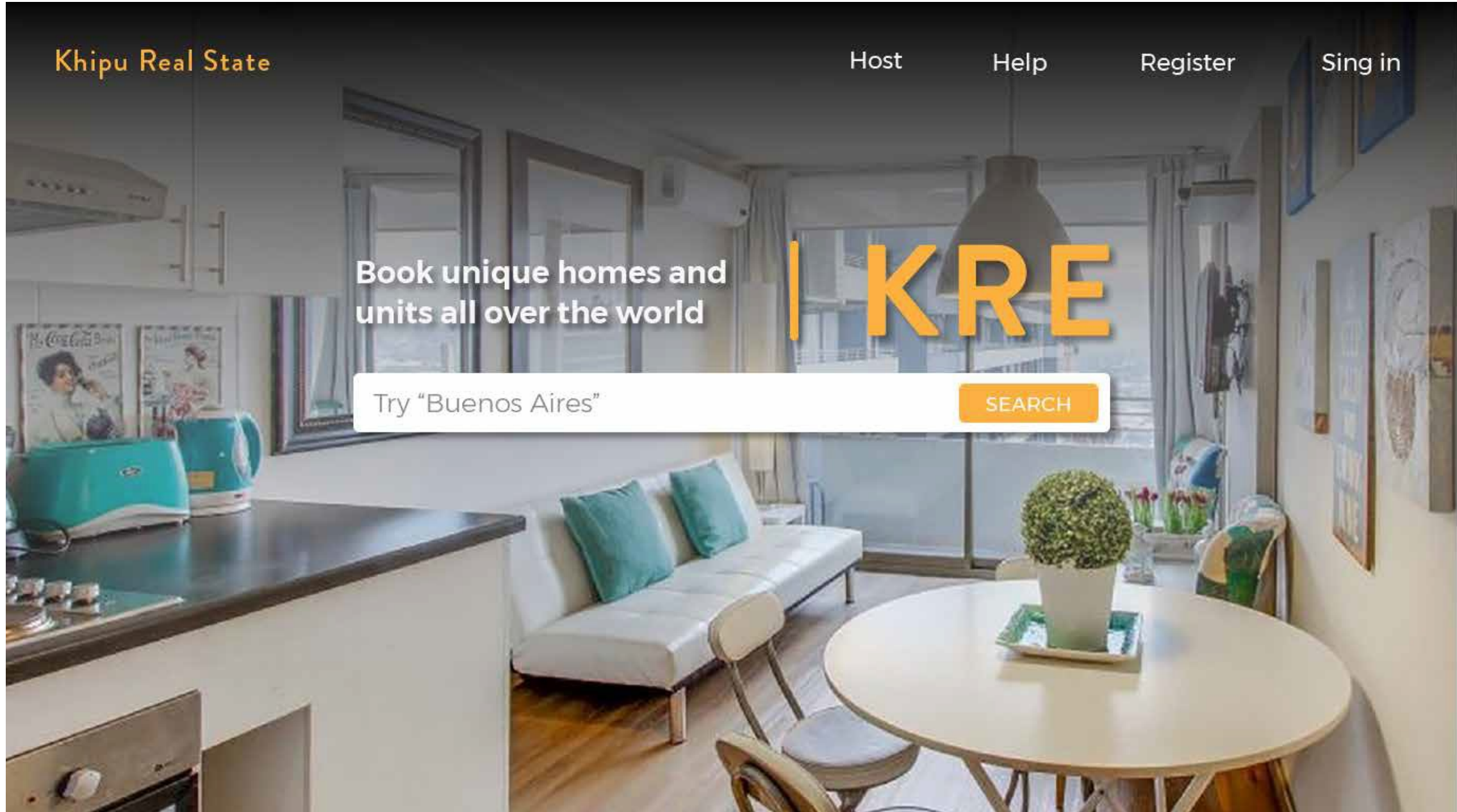
KIPHU REAL ESTATE

// VISUAL FLOW

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IT'S NOT ABOUT IDEAS, IT'S ABOUT MAKING IDEAS HAPPEN

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Khipu Real State

[Host](#)

[Help](#)

[Register](#)

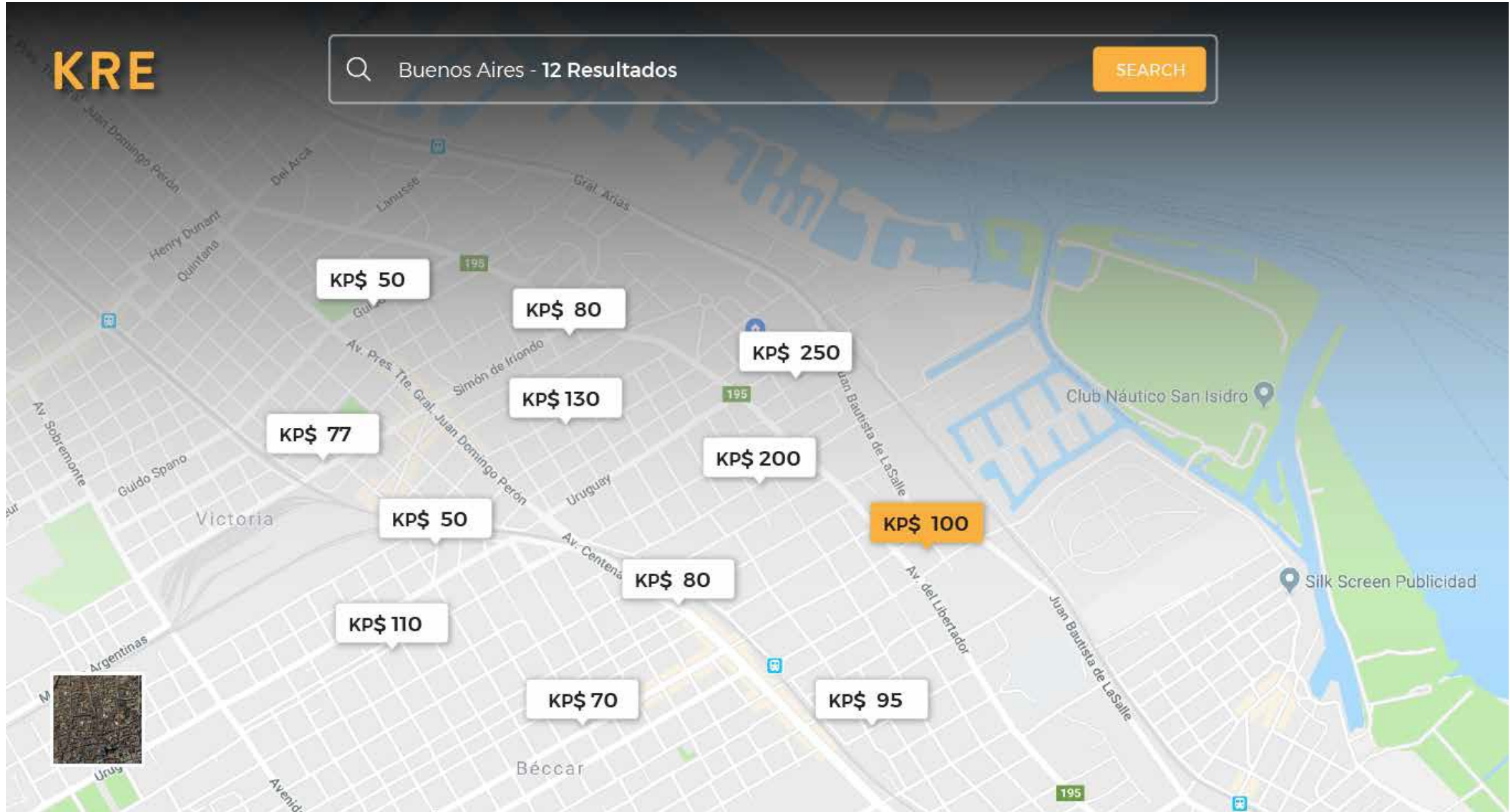
[Sing in](#)

Book unique homes and units all over the world

KRE

Try "Buenos Aires"

SEARCH



KRE

Buenos Aires - 12 Resultados

SEARCH

Map showing property prices in Buenos Aires:

- KP\$ 50
- KP\$ 80
- KP\$ 250
- KP\$ 130
- KP\$ 77
- KP\$ 200
- KP\$ 50
- KP\$ 80
- KP\$ 110
- KP\$ 70
- KP\$ 95

PRIVATE ROOM - 1 BED

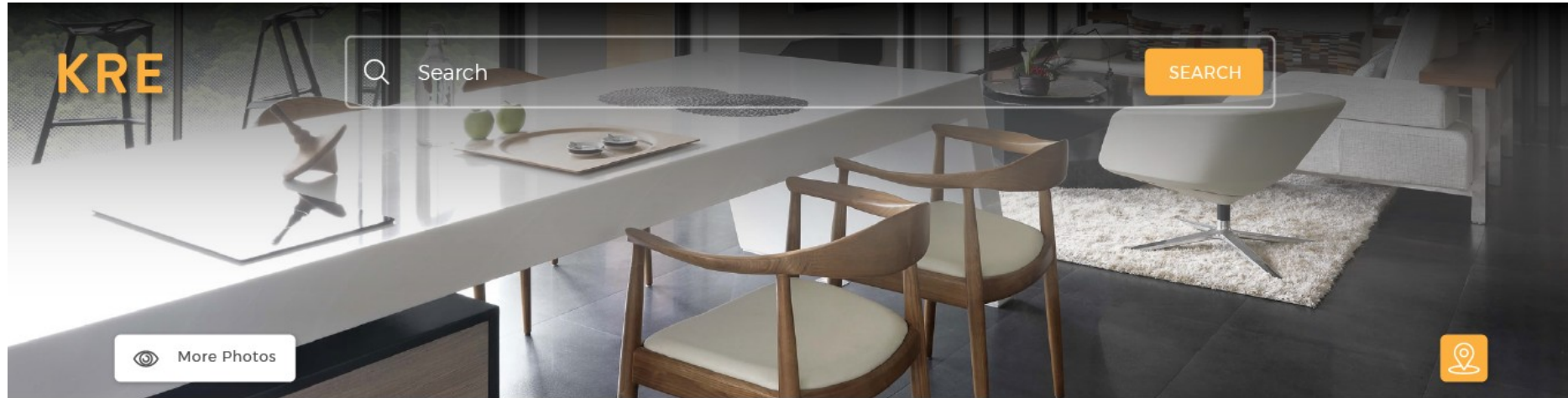
A nice apartment to stay the night

4.2 ★★★★★

KP\$ 100 \$400 USD

Private Master Bedroom in a one bedroom apartment.

Silk Screen Publicidad



A nice apartment to stay the night

BUENOS AIRES

ABOUT THE ROOM

Escape civilization to this incredible and peaceful getaway! Reconnect with nature and disconnect from technology on your own private deck surrounded by pristine and untouched nature just a short drive away from LA.

AMENITIES

- Essentials
- TV
- Wifi
- Free Parking
- Kitchen

CANCELATIONS

Strict - free cancellation within 48 hours of booking

Cancel within 48 hours of booking and 14 days before check-in to get a full refund. Cancel up to 7 days before check in and get a 50% refund (minus service fees). Cancel within 7 days of your trip and the reservation is non-refundable.

REVIEWS



View All Reviews

KP\$ 100 \$400 USD Per night

4.2

DATES

Check in Check out

GUESTS

1 guest

Book

The screenshot shows a login modal for 'Khipu Real Estate' overlaid on a property listing page. The background listing is for 'A nice apart' in 'BUENOS AIRES'. The modal contains the following elements:

- Header:** 'Khipu Real Estate' in orange text, with a close button (X) in the top right corner.
- EMAIL:** An envelope icon, the label 'EMAIL', and a text input field with the placeholder 'Please enter an email'.
- PASSWORD:** A lock icon, the label 'PASSWORD', and a text input field with the placeholder 'Please enter a password'.
- Remember me:** A checkbox and the text 'Remember me'.
- SING IN:** A large orange button.
- Or continue with:** Text centered below the button.
- Social Logins:** Two buttons for 'Facebook' (with the 'f' icon) and 'Google' (with the 'G' icon).
- Footer:** The text 'Don't yet have an account?' followed by a link 'Create a Khipu Account'.

Background listing details visible:

- Property Title:** A nice apart
- Location:** BUENOS AIRES
- Section:** ABOUT THE ROOM
- Description:** Escape civilization to this peaceful getaway! Reconnect and disconnect from technology with your own private deck surrounding an untouched nature just away from LA.
- Section:** CANCELATIONS
- Description:** Strict - free cancellation with 48 hours of notice. Cancel up to 7 days before departure and the reservation is non-refundable.
- Section:** REVIEWS
- Rating:** 4.5 stars (4 full stars, 1 half star).
- Button:** View All Reviews

KRE

REVIEW
& PAY

Edit Resevation

NAME JOHN SMITH			
MONDAY MAY 7	SATURDAY MAY 12	CHARGES KP\$ 500.00 \$ 2,000.00 usd	TAXES KP\$ 112.50 \$ 112.50 usd
DURATION 5 NIGHTS	GUESTS 2 ADULTS	TOTAL COST KP\$ 612.50 \$ 2,112.50 usd	

I agree with the Reservation *Therms and Conditions*

PAYMENT METHOD

KIPHU COIN

CREDIT CARD



BUENOS AIRES

**A nice apartment
to stay the night**

4.2

ROOM
Private room, 1 bed

PEOPLE
2 adults, 0 children

AMENITIES