# Introduction

## Background

Land is considered as unique and a finite resource. It is among the three major factors of production which include labor and capital and it is critical to the economic, social and cultural development of any country. The wealth of any nation and its economic development is dependent on the state of the land and its usage.

Land registration systems play key role in reducing land disputes. These records can be used to:

a) protect owner’s rights

b) prevent sale frauds

c) resolve dispute

They provide evidence of title to a landholder with respect to a particular land parcel and show the boundaries of land parcels. This in turn helps reduce land disputes by assisting the remedial measure after an act of violation of a land right. The frequency of boundary disputes is usually correlated to the quality of the cadastre of land information system including primarily its being up-to-date. [1]

Traditionally Land registration process is handled by the lowest level of local government (kebele and sub-kebele). High school graduates were trained in land registration techniques and traditional land allocators elected by the local community, who were involved in the original land redistribution process, are engaged in the registration process in the region, in some regions kebele and sub-kebele land administration committees were elected by the local community and trained as land registrars. A local consultation process takes place before registration. The technology used there is very simple. [2]

Our solution is to make landownership digitalized and more transparent by recording land ownership. Blockchain was a logical choice for us, assisting us to achieve our vision of making land more transparent, trustworthy and secure. The application adheres to local land commission procedures and details the transaction history of the land. but how does blockchain provide trust and transparency for property ownership, first through data integrity property records are digitally signed or hashed and stored on to the blockchain then the data is stored on a secure private distributed ledger that ledger is then further secured on the public Ethereum blockchain thru anchoring providing an immutable publicly backed historical log of the system.

Land is the source of all material wealth; it provides us with all our needs to sustain on. It is also a major economic asset from which people and nations get significant profit

Ethiopian law  Land and buildings are considered as immovables (Article 1130 Civil Code).

In principle, land registries simply need to maintain records of land and real estate ownership, recording changes of hands/ownership as they happen over the years as people sell and move on and or when people pass on plus inheritance. It may seem to be a very simple task, but in reality, it comes with a whole myriad of challenges.

**a)Forgery**

The paper document used in land registration can be replicated and this counterfeit can create a real threat for the landowner. The landowner risks losing his/her land

**b) Human error**

A large amount of human interaction occurs during the land registration process. Eventually leading to a large number of human prone errors.

**c) Wear and tear of documents**

As we all know printed documents don't last more than a decade if not preserved well. Due to this wear and tear, most of the traditional documents are unidentifiable.

**d) Traceability**

In some countries, through paper documents, you can only know the current owner. It does not allow us to find out who else owned that land before.

Land ownership in many countries is a baffling trade, with corruption and difficulties in proving ownership of land being endemic in some countries.

A blockchain-based approach to registering property titles could increase the efficiency of transaction processing and reduce, if not entirely prevent property fraud.’

Blockchain is not a household buzzword, like the 'Cloud' or the 'Internet of Things(IoT)'

**A blockchain is made up of two primary components**: a decentralized network facilitating and verifying registory, and the immutable ledger that the network maintains