



# Civic Ledger

We are a leading digital infrastructure company building next-gen transparent marketplaces to transact with confidence.

[www.civicledger.com](http://www.civicledger.com)





# About Us

Civic Ledger is a multi-award-winning Australian technology company that helps governments, industry and citizens bring auditability, automation and granular data together in real-time on the public ledger, enabling greater transparency and easier compliance. Our purpose is to build next generation marketplaces for highly regulated assets where "trustlessness" matters.

In July 2021, Civic Ledger was accepted into the World Economic Forum Technology Pioneers 2021, in June 2022 was announced at the Australian FinTech "Finnies" Award as the Winner for Excellence in Blockchain / DLT and once again in 2023.



# Vision

*Civic Ledger is the trusted global ledger that all civic life takes place on. Our vision is to build fair and transparent marketplaces of tomorrow.*

# Mission

*Our mission is to build trusted multi-lateral marketplaces with blockchain technology capabilities to the benefit of all.*





# What is a Water Market?



A **water market** is a set of rules that allow farmers to buy, sell, or lease water from other farmers.



**Water rights** are the underlying water assets that are bought, sold, or leased.



A water market cannot **function effectively** without knowing who owns what water right, where, and for how much water.

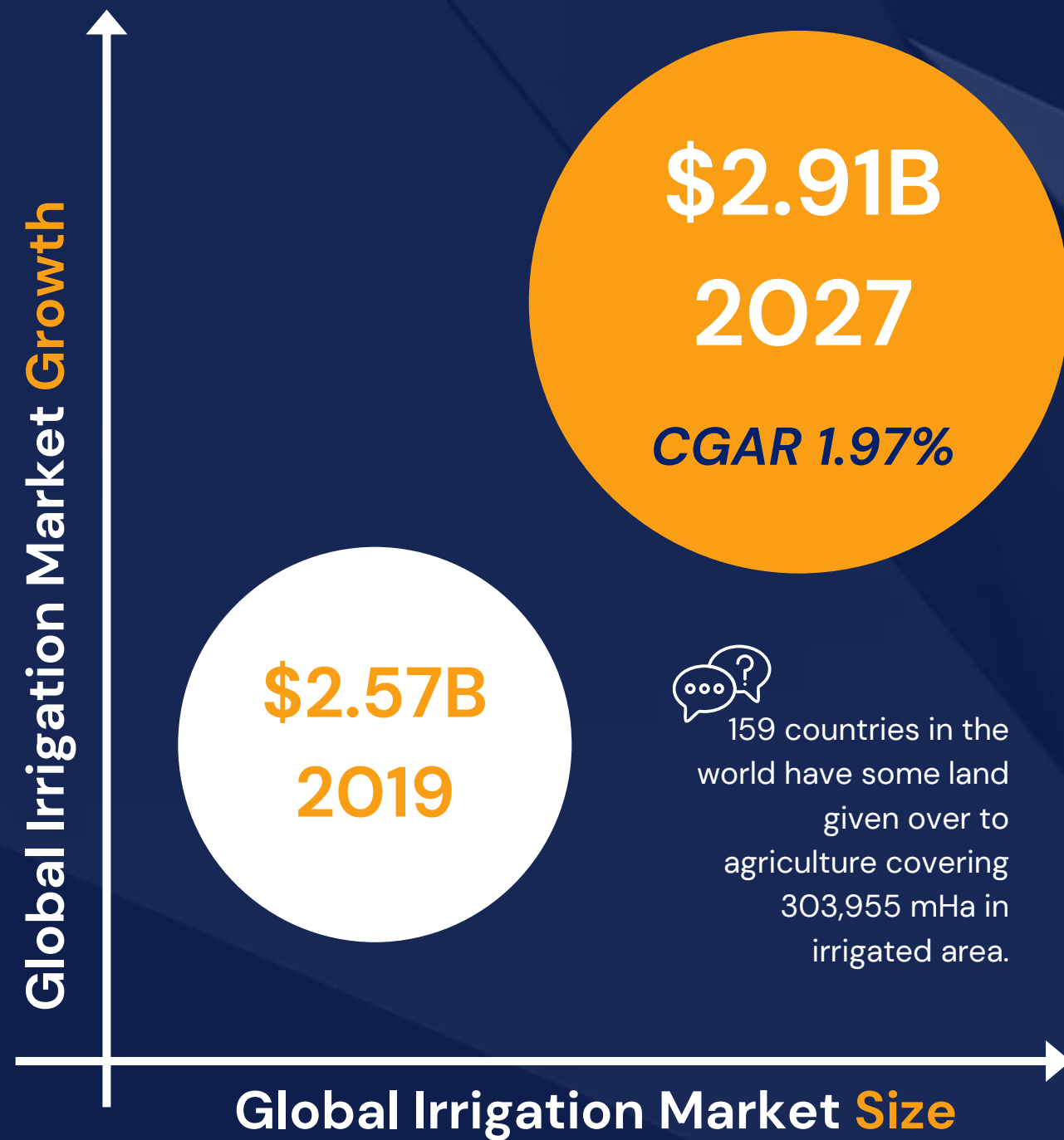


In 2020–2021, Australian farmers bought, sold, or leased **7,991 GL** of water with a monetary value of **AUD\$6 billion**.

Water markets where water assets are treated as a tradable commodity to manage water demand are cited as a lower cost solution to better allocate water and address the problem of water scarcity.



# Global Irrigation Market Size

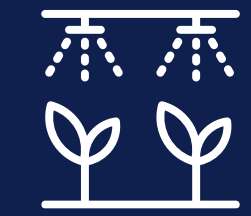


 159 countries in the world have some land given over to agriculture covering 303,955 mHa in irrigated area.

## Trends



Increasing acceptance of automated irrigation systems



High application efficiency through sprinklers

## Drivers



Increasing number of modern irrigation systems



Rising demand for global crop production

## Players



## Segments



**North America**  
\$930.85M 2019



**APAC**  
\$350.94M 2021  
CGAR 17.9%



# The Problem

## Water Markets 1.0



### Paper Records

Water rights locked in paper, lawyers to verify who owns what and how much with more paper water rights than water rights available.

**Unsustainable water extraction.**

## Water Markets 2.0



### Centralised Systems

Water accounting and trading data held in mix of public and private systems that do not interoperate, built and owned by vested interests.

**Double spend of water entitlements.**

Over the decades, water markets and government regulation have made buying and selling of water entitlements highly **administrative**, **costly** and **complex** for market participants to navigate.



# Meet Joe, a Mango Farmer



For Joe, and for farmers like Joe, finding the water in the first place is the pain point and an easy to access to a water market with listing price would be a good thing.

**So they asked us to build a next-generation water market:**

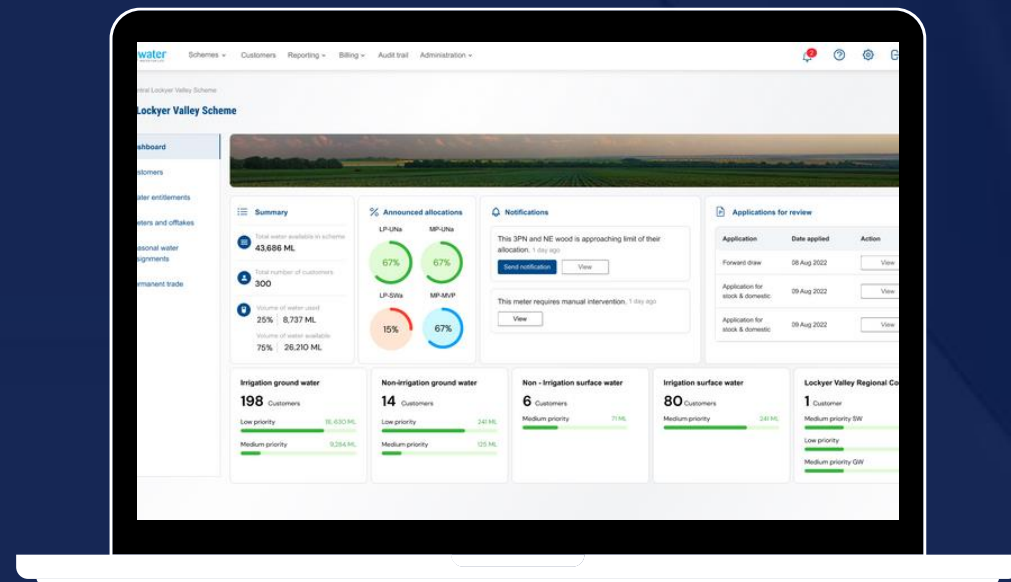
- Wants a system to be as simple as buying shares.
- Doesn't want to see names, just trades.
- Wants to see trades and history, get a feel for the market.
- Put in bids, buy and sell of temporary and permanent trades.
- Wants to know what the market price is.
- Might have 10–15% extra water they could trade.





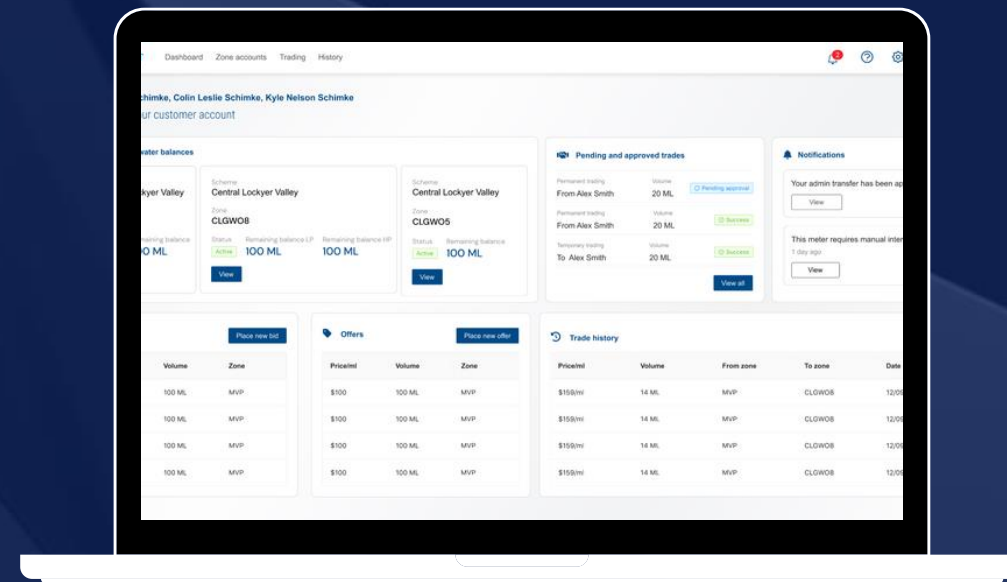
# The Solution

## Accounting



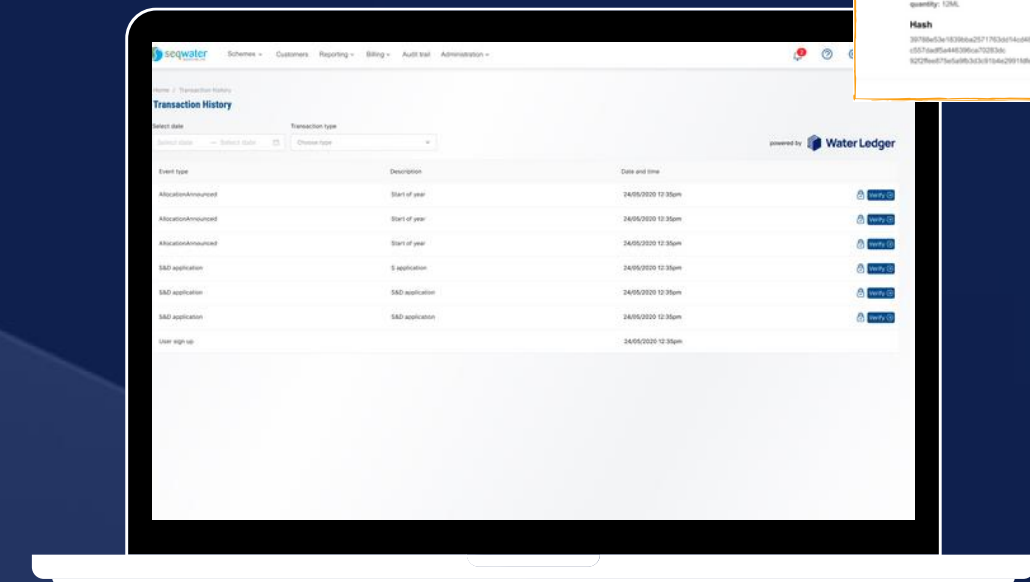
An **accounting system** that maintains a ledger of accurate tamper-evident information on water rights and water balances.

## Trading

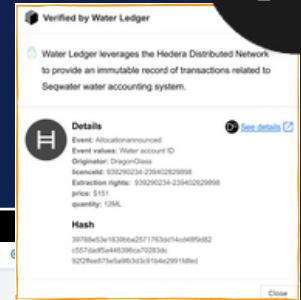


A **Community Water Exchange** that connects buyers and sellers and facilitates transactions of water assets.

## Auditing



An **audit log** that allows regulators to verify water transactions and usage for easier proof of compliance increasing trust.





# A Smarter Water Market for Farmers

## Water Markets

3.0



## Blockchain Technology

Convergence of three features: shared ledger, tokenisation to digitally twin water assets, and smart contracts to automate complex business and operating rules.

**Transparent and irrigator lead.**

Water Ledger's digital infrastructure connects water market participants into a **single**, secure technology platform.



Multi-Token Accounting.



Peer-to-Peer Trading.



Compliant-by-Design.



Immutable Audit Logs.




## Water Ledger

Our solution provides the farmer with **easy** and **direct** access to water markets and accounting support, so they have **greater control** over their water assets, and in turn, **reduce time** and **costs** managing their water entitlements.





 Water is place-based and generates economic-social-environmental-cultural value linked to the watershed.

# Benefits

Water Ledger's digital infrastructure connects water market participants into a single, secure technology platform combining **new generation market design, transparency** and **data**.

 **Integration**

Built with open source technology and standards to remove vendor lock in and fully API driven to **integrate** within the entire global water value chain ecosystem.

 **Efficiency**

Eliminates water market complexity and information asymmetry to help participants **efficiently** trade with confidence and allocate water to its highest value use.

 **Transparency**

Allows equal access to information and makes all changes to the market rules **transparent** to all preventing the creation of knowledge monopolies.

 **Savings**

Removes the need for intermediaries increasing **cost savings** to market participants by reducing transaction costs and transaction time and removing counterparty risk.



# Our Impact

Ultimately, Water Ledger is an enabler to achieving a sustainable and just water future by transforming the economics and restructuring the governance of water.



Partnership to building country-level digital platform approach to accounting for water to contribute to both national development goals and the global common good.



Governance of water resources moves from top-down regulation to place-based, bottom up governance improving how water is supplied, used and shared.



Systematically incorporate the values of water into decision-making through accountability and transparency, so it can be used far more efficiently for every sector.



# Traction



Scaling Next  
Generation Water  
Markets in  
Northern  
Australia.



Water  
Accounting  
System and  
Trading Platform  
Southeast  
Queensland.



Water  
Conservation  
Certificate  
Scheme  
California.



# Key People

For the past six years, Katrina and Fraser have worked together building Civic Ledger as it is today. Before Civic Ledger, both worked in government in areas of water, regulation, strategy, policy and technology.

Katrina is a member of the Taskforce on Nature Markets and Fraser represents Civic Ledger in our role as Knowledge Partner to help shape nature positive and equitable outcomes from nature markets, with a specific focus on water.



## **Katrina Donaghy**

### **Chief Executive Officer + Founder**

Prior to founding Civic Ledger, Katrina was a career bureaucrat spanning two decades in both state and local governments. Katrina is a former Director for Blockchain Australia and founded the Women in Blockchain Australia chapter, is a Blockchain Australia Fellow and a recognised Female FinTech leader in Australia.



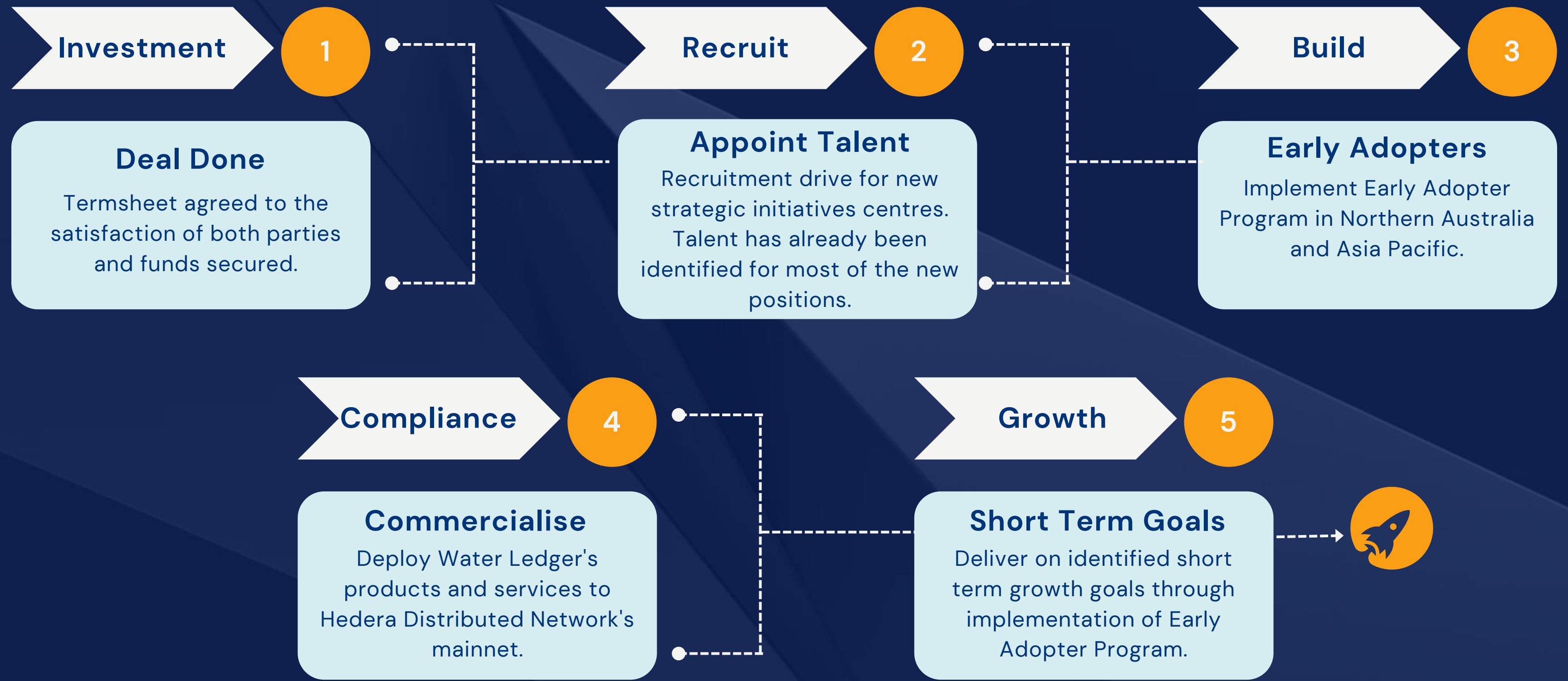
## **Dr Fraser MacLeod**

### **Chief Product Officer**

Fraser has 20+ years of experience in water, sustainability, and natural resources policy, management and practice. Fraser led the technical development of the Murray–Darling Basin Plan, and is a former Executive Director of the World Water Council. He has received his PhD in information technology.



# Roadmap Q4 2023–Q3 2024





# Thank You



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*Civic Ledger acknowledges Aboriginal and Torres Strait Islander peoples as the First Australians and Traditional Custodians of the lands and waters where we live, learn, work and play. Their lands and waters were never ceded.*