Unlocking Municipal Water Capital Through Digital Registries

A Guide to Digital Registries and Water Markets

1. Executive Summary

Around the world, city water departments face a double challenge. They must upgrade old pipes and water plants to handle climate stress. They must also reduce water waste from underground leaks. Many cities also need to build brand-new plants to meet demand from growing populations. However, building this infrastructure takes massive upfront cash. Relying only on traditional city debt, tax dollars, or raising water bills on local residents is slow, cumbersome and rarely supplies enough money.

Water markets can also be hard to manage. In many areas, large suppliers own the big pipes while local sellers bill the customers. This divide creates friction and delays new projects.

Kreneon provides a financial software infrastructure solution. It links municipal water systems directly to global investors. The platform changes water flow data and water saved through leak repairs into digital contracts. These contracts help utilities secure private money, lower borrowing costs, and share income automatically—all without changing existing water meters.

2. The Main Problem: Why City Water Lacks Upfront Money

Building a new treatment plant or replacing old pipes needs cash upfront. Utilities face three main barriers:

- **Saved Water Earns No Revenue:** Fixing leaks stops water waste. However, utilities currently have no standard way to turn those saved gallons into verified cash credits.
- **Multi-Party Market Friction:** Wholesalers own the big pipes and plants. Retailers manage customer billing. Because the market is split, neither side can easily collect the

full return on a new project.

- **Complex Deals Scare Investors:** Large investors have trillions of dollars for green projects. Yet every city uses different contracts. Investors view water projects as too complex and risky.

3. How Digital Agreements Work in Practice

Kreneon builds a Digital Asset Registry. This secure digital record links physical water measurement directly to clear financial agreements.

3.1 What is a Forward Water Agreement?

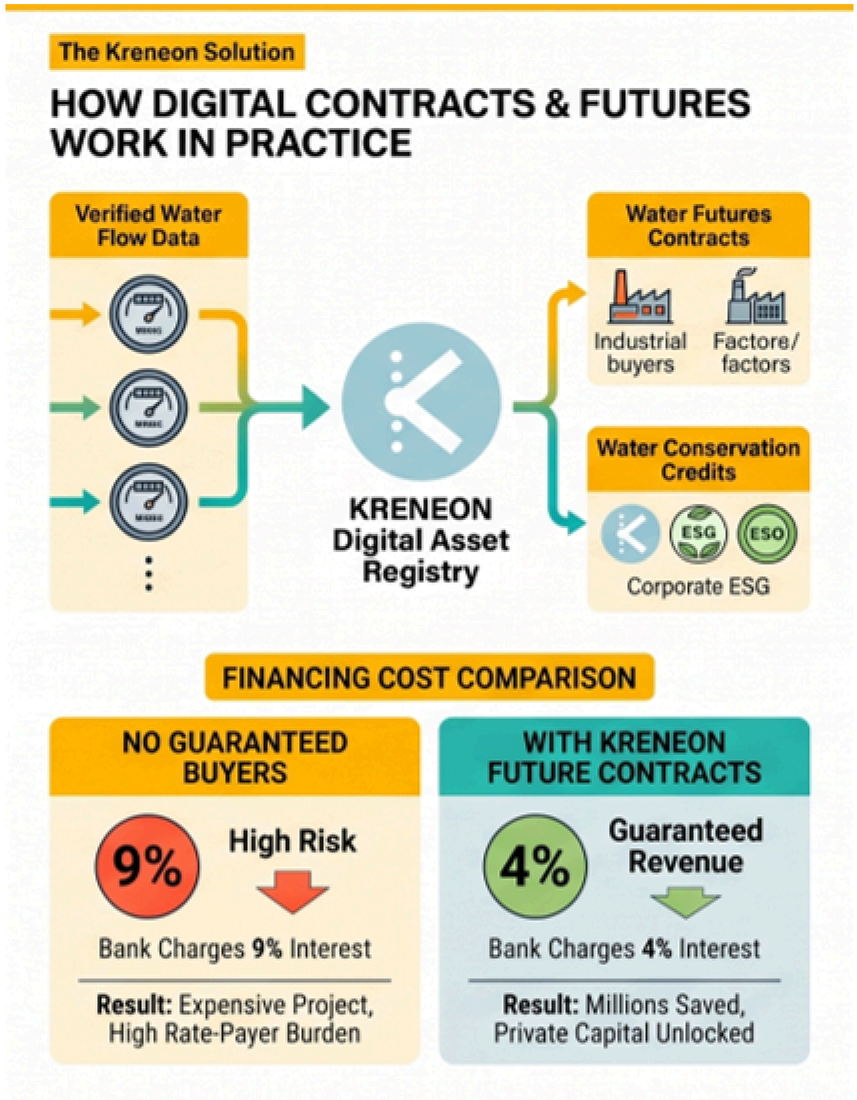
A forward agreement is a set deal made today. It promises to buy or sell water at a set price on a future date.

> **Example:** A city wants to build a $20 million water recycling plant. Before building begins, three factories agree to buy recycled water for 10 years. This agreement guarantees future income before the city spends any money.

3.2 How Forward Agreements Lower Borrowing Costs

Borrowing $20 million with no guaranteed buyers is risky. Lenders charge high interest rates (like 8% to 10%) to cover that risk.

When a city shows a signed forward agreement with solid buyers, the risk drops. Lenders accept the agreement as safety and lower the interest rate to 3% or 4%. This lower rate saves the city millions of dollars over time.

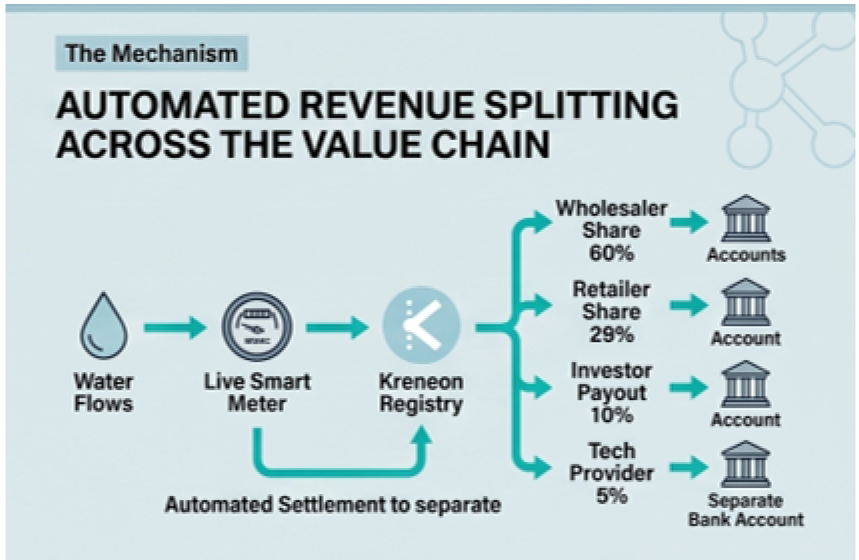


3.3 Automatic Payment Sharing Across Partners

In split markets, a single water project involves many partners, including suppliers, local sellers, funders, and tech companies.

In old systems, collecting money from customers and sharing it with suppliers, sellers, and funders takes months of manual paper bills and transfers.

Kreneon uses automated software settlements. When a customer pays a bill, the software calculates each partner's share and sends funds directly to their accounts. This prevents billing disputes and speeds up payments.



4. Turning Fixed Leaks into Two Income Streams

When a water department fixes leaks, it reduces lost water. Kreneon software creates a verified record of saved water. This single repair creates two income streams:

1. **Direct Water Sales:** The saved water remains in the pipes and is sold directly to homes and businesses.
2. **Water Conservation Credits:** Verified water savings become digital credits. Companies buy these credits to reach sustainability goals, giving the water department extra income.

5. Non-Intrusive Integration: Protecting Existing Meters

Water departments already own millions of smart water meters. Kreneon does not change or touch existing meter hardware. Instead, Kreneon acts as a passive software observer:

- It connects to the meters with a secure data link.
- It verifies flow data in the background to build financial records for funders while keeping all meter warranties active.

6. Summary of Benefits for Municipal Leadership

- **Unlock Private Funding:** Access low-cost private capital without increasing local taxes or customer water rates.
- **Lower Borrowing Costs:** Use pre-signed purchase agreements to secure lower interest rates from lenders.
- **Align All Partners:** Automatically split revenues between suppliers, local sellers, and funders.
- **Earn Money from Leaks:** Sell physical saved water and mint conservation credits for corporate buyers.
- **Zero Hardware Risk:** Add modern financial software without altering or replacing physical meters.

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