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Reducing Water Losses in Amman

Case Study

KEY HIGHLIGHTS

How Emerging Technology & Active Decision Making Help Water Utilities Achieve Feasibility

In this case study, we explore how Flowless system helps Miyahuna Water Utility in leak detection, reducing losses and saving 20 m^3 of water per hour of water supply.

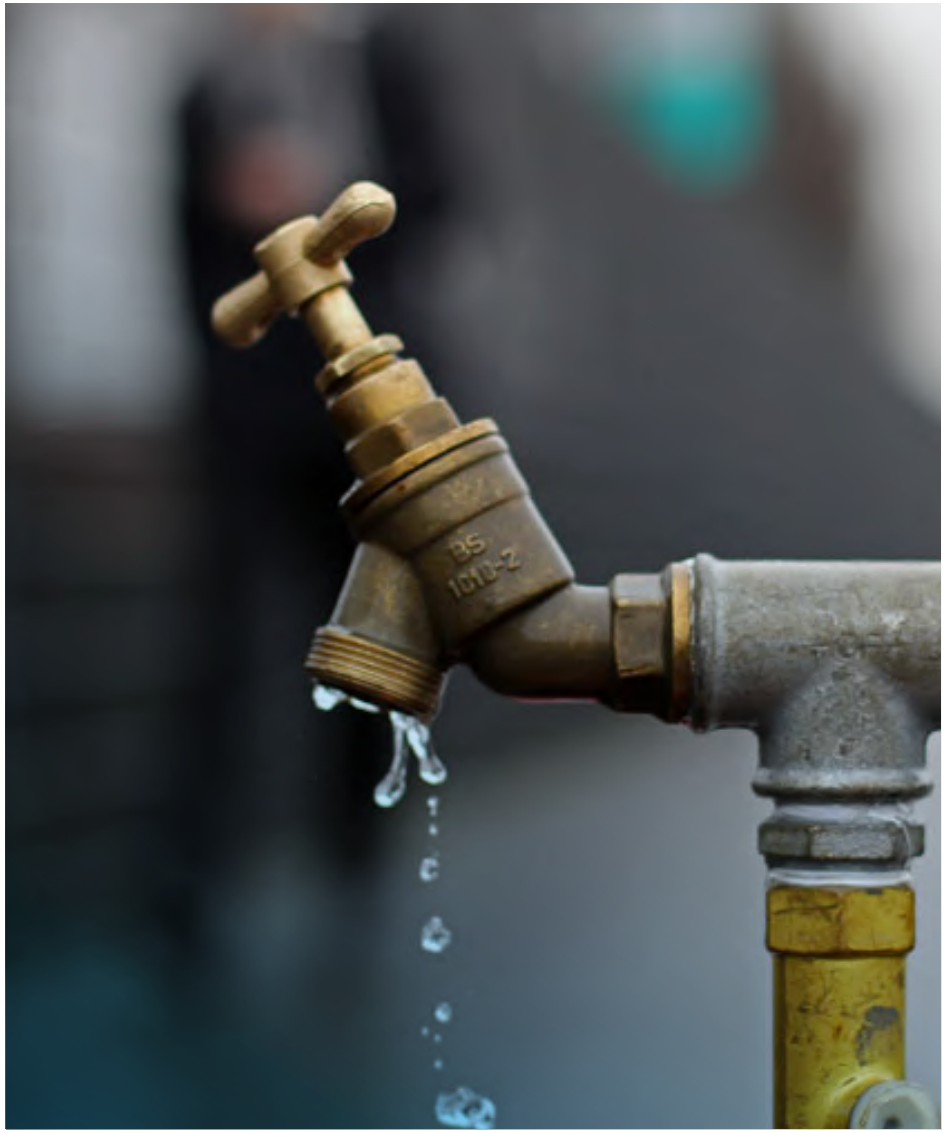
- Real-time data collection is essential for NRW management and leak detection.
- Automation in data analysis and reporting facilitate effective water networks management.
- Utilizing emerging technologies enhances operations and facilitates efficient losses reduction

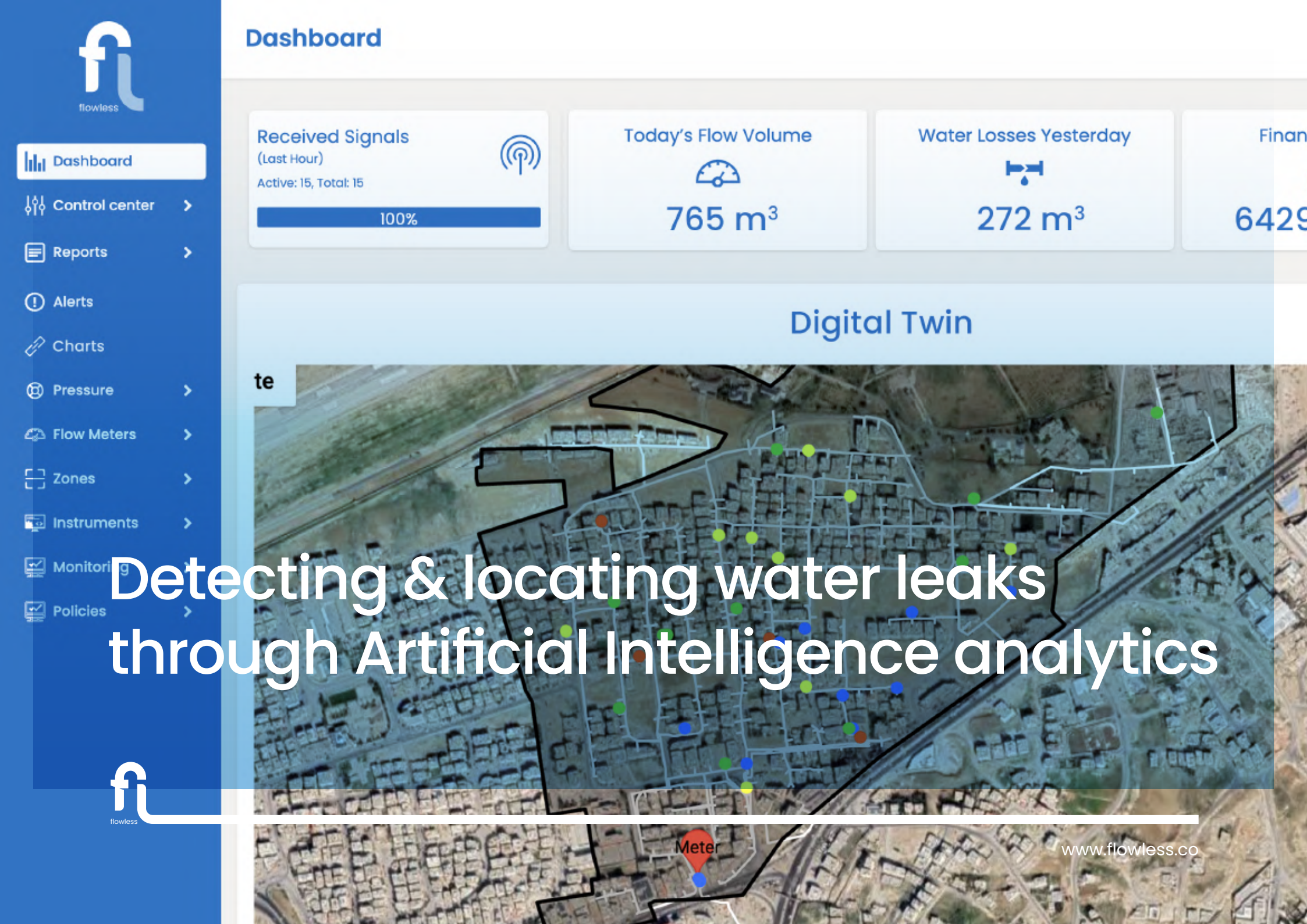
WATER SAVINGS IN AMMAN

Brief Overview

Miyahuna Water Utility is on track for achieving huge water savings, currently saving 20 cubic meter per hour in a small area (~2500 house connections) in Amman. Through active leak detection and data interpretation, Miyahuna utilized Flowless platform and the AI-aided analytics to achieve water savings of 18%.

Flowless system utilizes real-time data collected from the water network to provide actionable interpretations for losses reduction. Flow and pressure data is collected from sellected points in the water network and analyzed through Flowless platform to determine the quantity and location of potential water leaks. Analysis results are depicted through customizable graphs, tables, and map views.





Detecting & locating water leaks through Artificial Intelligence analytics

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WATER SUPPLY IN AMMAN

And Water Management Challenges

- Water Scarcity
- Growing demand
- Conventional management

Amman is the capital of Jordan. It is home to more than 4 million people. Positioned at the heart of Jordan, Amman has a rich mixture of cultures and a wide diversity of people. The local community is diverse and generous, mostly living in urban setting.

Miyahuna Water Utility is responsible for managing municipal water supply for the city. The urban setting and highly condensed neighborhoods add more complexity water supply management, which adds to the natural challenges of water scarcity in the region. The demand is continuously growing, and the available resources are finite.

FLOWLESS INTERVENTION

The “What” and The “Why”

Flowless team partnered with Miyahuna and the WMI (Water Management Initiative) to monitor water network in a selected area in Amman. Real-time data was collected on water flow and pressure. Flowless artificial intelligence algorithms analyze this data to automaticall detect water leaks. The aim was to:

1 Monitor water supply for active leak detection

2 Automatically detect locations of potential leaks

Flowless web platform supports water management through:

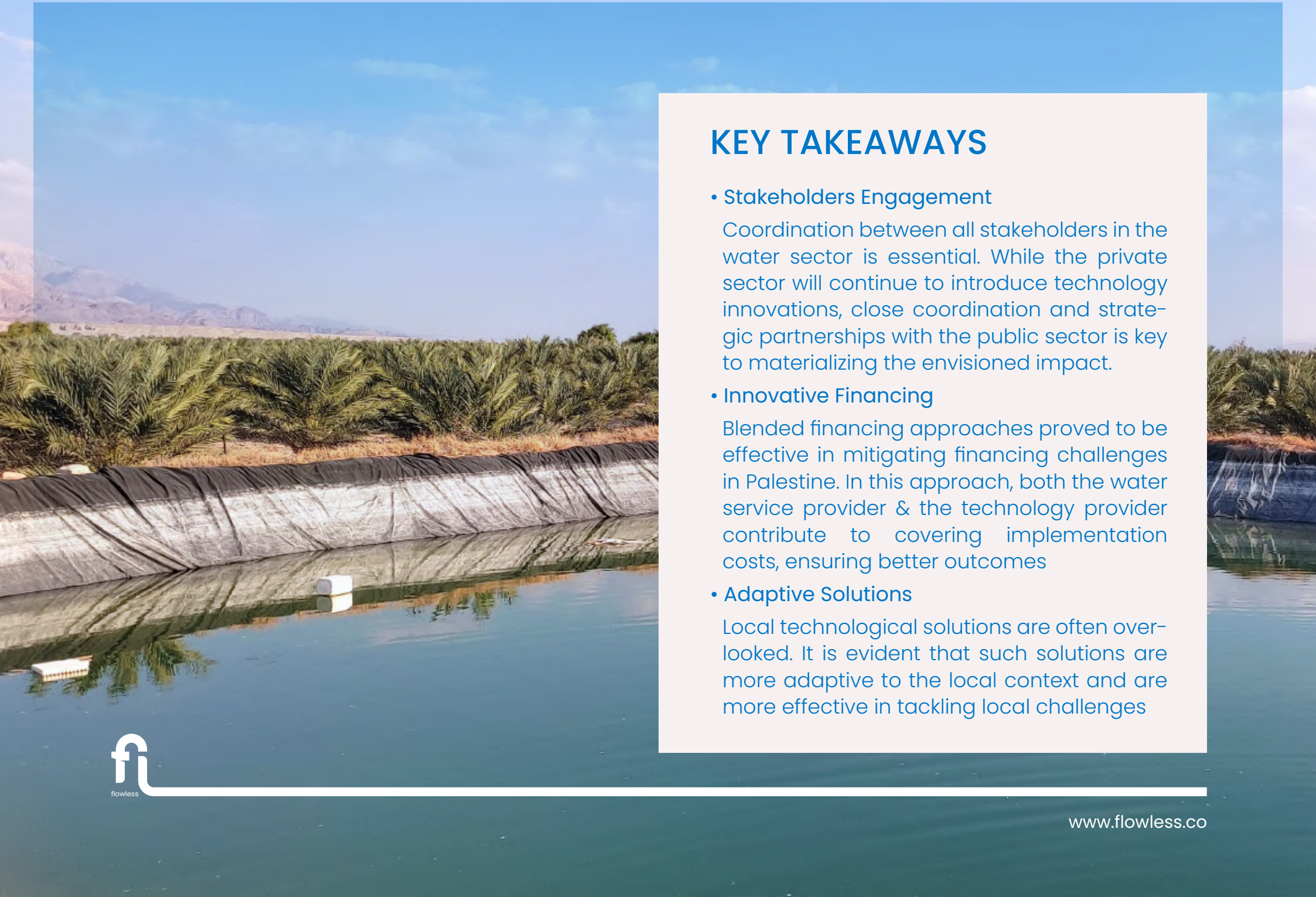
1. Early alert system for system faults and errors
2. Data analytics with actionable interpretations
3. Smart leak detection and leak localization
4. Customizable reports & visualization

HOW FLOWLESS WORKS

Our Approach and System Design

Flowless integrates emerging technology, innovative financing, and social responsibility to support water utilities in enhancing water efficiency. Flowless system utilizes IoT and AI technologies to optimize operations and automate processes in water networks. It starts with collecting real-time data from the field, then analyzes it and provides robust tools for automated leak detection and process optimization, ultimately contributing to cutting water losses and enhancing water supply.

We have been working with utilities and municipalities in Jordan for the past couple of years, and we implemented projects to monitor water networks, detect leaks, and provide consumption tracking.



KEY TAKEAWAYS

- **Stakeholders Engagement**

  Coordination between all stakeholders in the water sector is essential. While the private sector will continue to introduce technology innovations, close coordination and strategic partnerships with the public sector is key to materializing the envisioned impact.

- **Innovative Financing**

  Blended financing approaches proved to be effective in mitigating financing challenges in Palestine. In this approach, both the water service provider & the technology provider contribute to covering implementation costs, ensuring better outcomes

- **Adaptive Solutions**

  Local technological solutions are often overlooked. It is evident that such solutions are more adaptive to the local context and are more effective in tackling local challenges

Interested in contributing to Flowless impact? Drop us an email!

info@flowless.co

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Thank you!

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