An Open Decision Support Platform to Create a 50-Year Plan for Water Security in Lincoln County, Oregon

Vision and Scope

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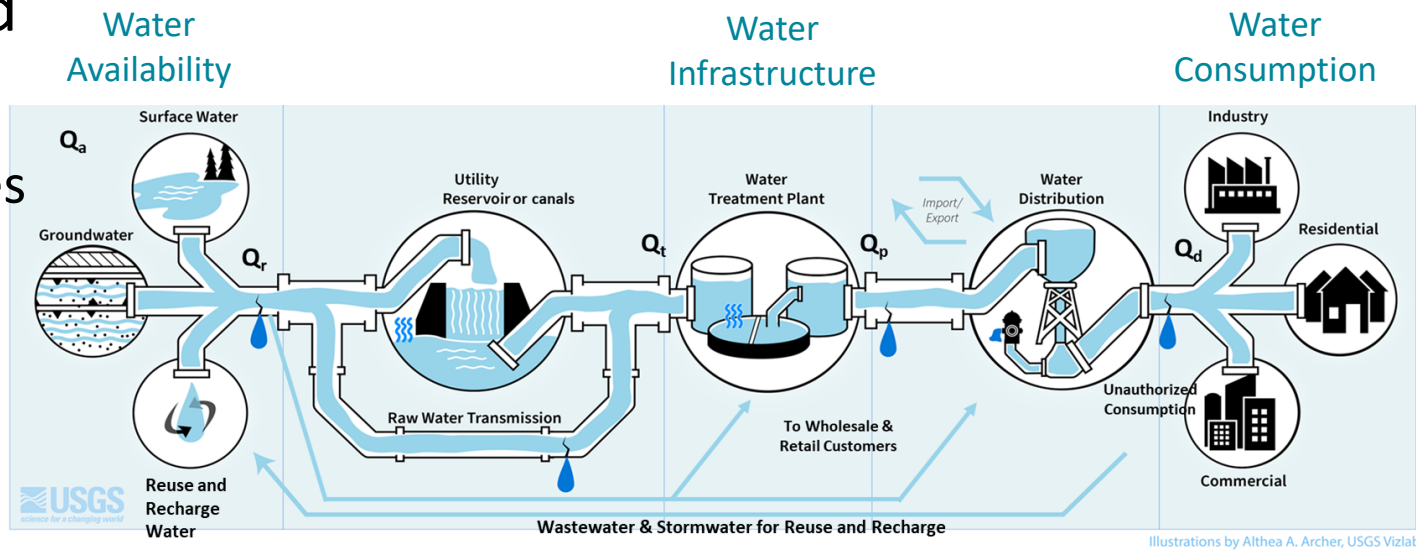
Vision of this Project

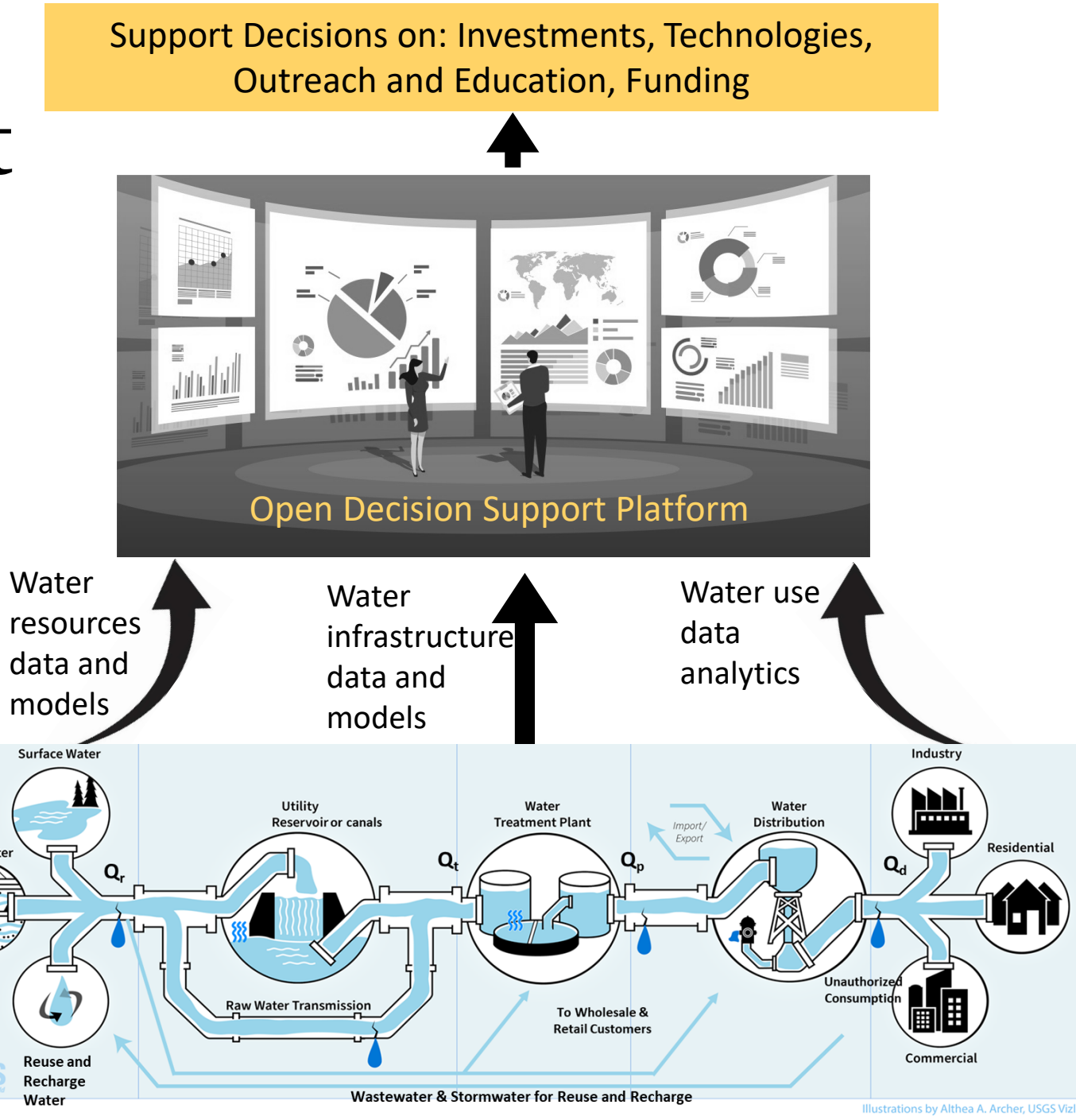
- **Team Building project** funded by OSU Transdisciplinary Research Seed Fund Program
  - Project Title: Enabling One Water Security for Climate-Ready Communities
- To **improve small communities' access to and adoption of data, models, and optimization tools** necessary for identifying **integrated** management solutions for water systems.
  1. Water Availability Planning
  2. Water Infrastructure Planning
  3. Water Consumption Planning



Stresses and vulnerabilities can arise in many components of our integrated water systems

Scope of this Project

- Ideate and conceptually design an Open Decision Support Platform and technology adoption plan for Lincoln County communities
    1. **to support** the creation of a feasible 50-year county-wide water supply plan, and
    2. **improve capacity** of communities to be resilient the face of natural and human-caused disasters, while achieving sustainable protections for our rivers, streams, and watersheds



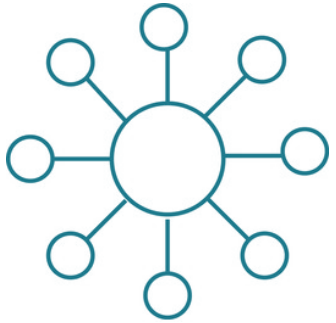
Why an open decision analysis platform?

Transparent

Clarifies what problem is being solved, who is the decision maker, what requirements and constraints are involved, what and how data, models, and processes are being used and shared.

Inclusive

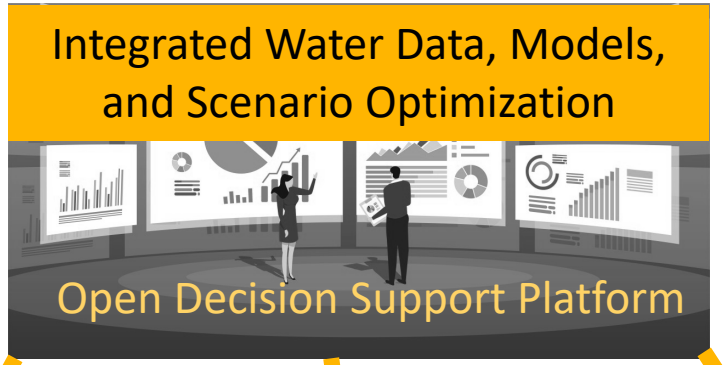
Allows for engagement with community partners for input, feedback, and different perspectives in the entire decision making process (Ideation > Defining > Designing > Planning > Testing > Implementation)



Open Source & Interoperable

Employs standards and protocols for seamless data exchange between diverse modeling systems and open source software with minimal human intervention, while sustaining security and reducing costs

In the long run, the platform would allow communities in Lincoln County to generate scenarios and make diverse water supply decisions.



Alternative and new sources of water?

Reduce inefficiencies and inequities in water supply resources?

Impact of water withdrawals on natural water resources and environment?

Decisions to reduce inefficiencies (e.g., water loss)?

New natural and built infrastructure investments for capacity expansion and increased storage?

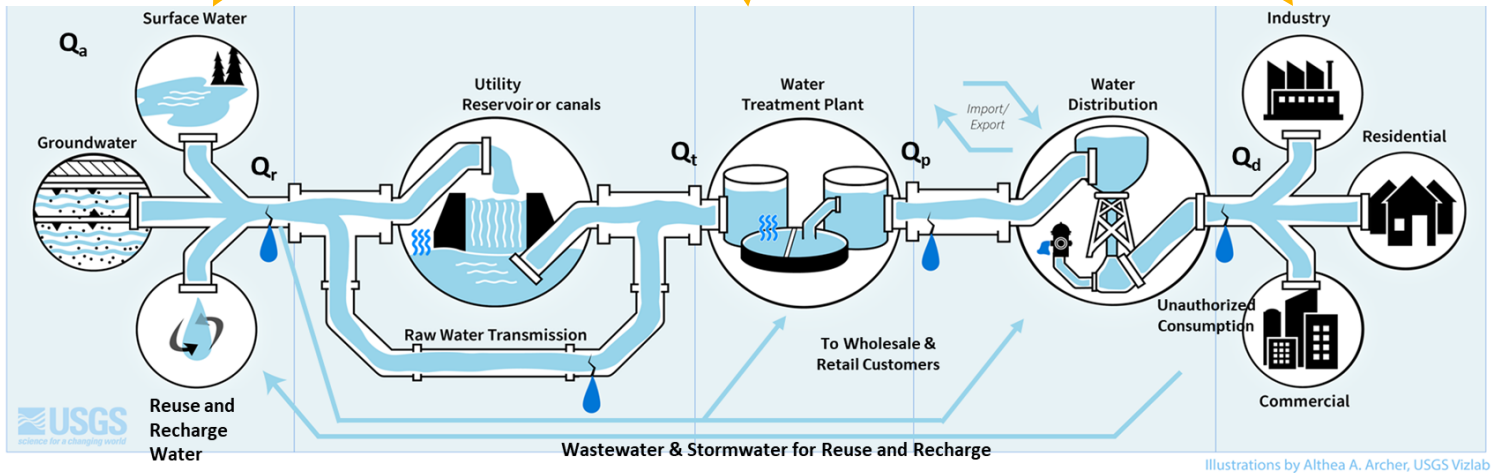
Pricing decisions?

New incentives?

Conservation Strategies?

Improve access to clean and safe water?

Outreach and Education?



Illustrations by Althea A. Archer, USGS Vizlab

When open decisions are made, people feel…

- *I see why the decision was made and how it fits with our strategy, goals, and mission*.
- *I contributed to the decision-making process.*
- *I feel confident that informed decisions have been made because of the quality of the data and analysis.*
- *My input was acknowledged and appreciated.*

Upcoming Steps

- Conduct focus groups in 2-3 testbed communities to identify decision support system (DSS) needs.
    1. Water Availability Planning Needs
    2. Water Infrastructure Planning Needs
    3. Water Consumption Planning Needs
- Identify which features and capabilities should be included in the envisioned DSS to meet community and environmental needs.
- Seek funding to build, test, and deploy DSS for Lincoln County.

Thank you!