Internet of Water

Sharing and Integrating Water Data for Sustainability

PURPOSE

How to create a national framework for sharing and integrate already existing publicly collected water data?

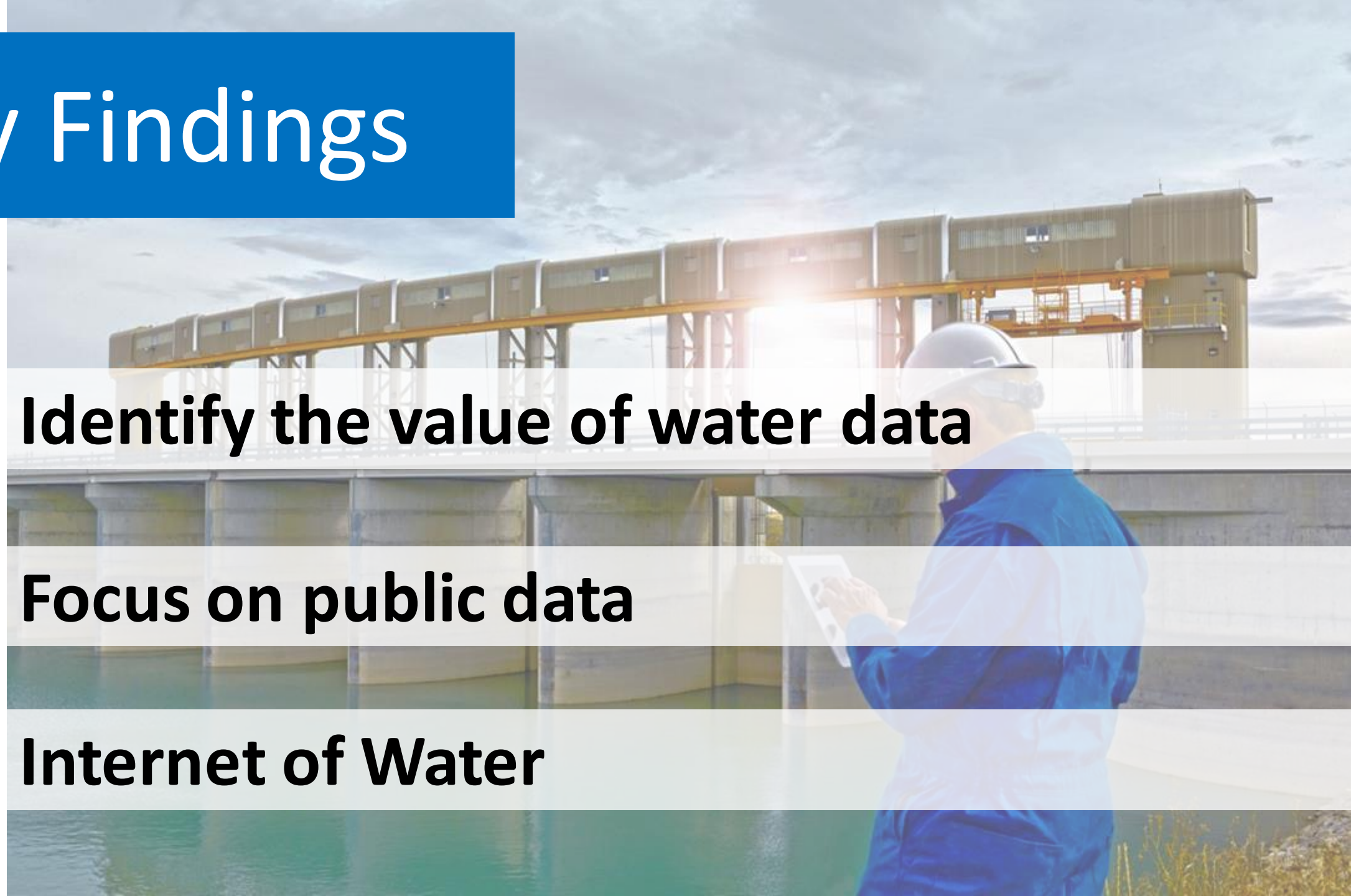
Aspen Institute Dialogue Series on Water Data

REDSTONE THE ASPEN INSTITUTE Duke NICHOLAS INSTITUTE

PARTICIPANTS

The Dialogue Series brought ~27 water experts, managers, policy makers, regulators, and representatives from the private and social sectors.

Key Findings



Identify the value of water data

Focus on public data

Internet of Water

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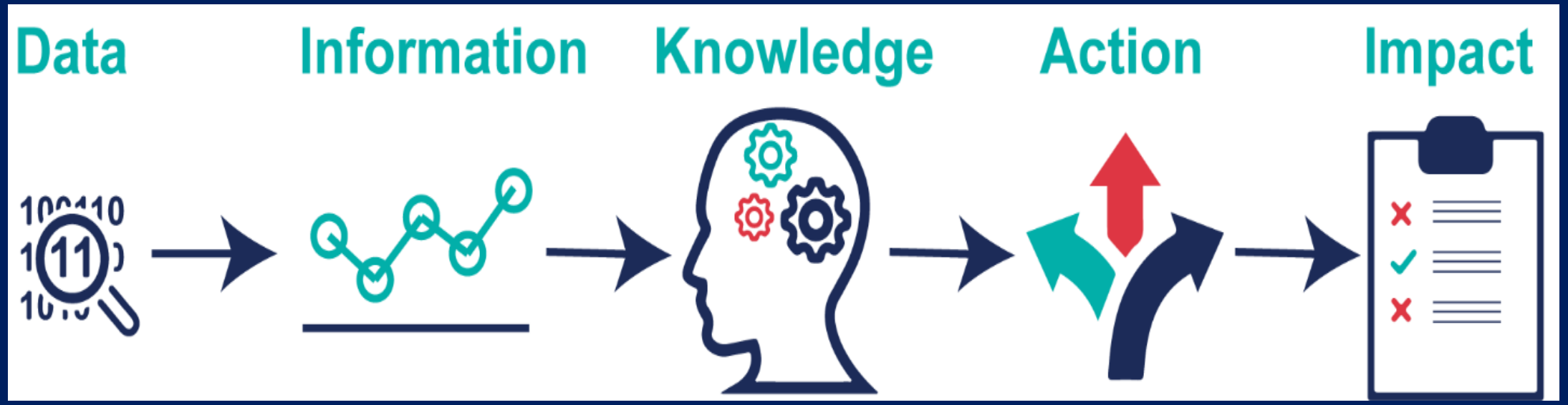
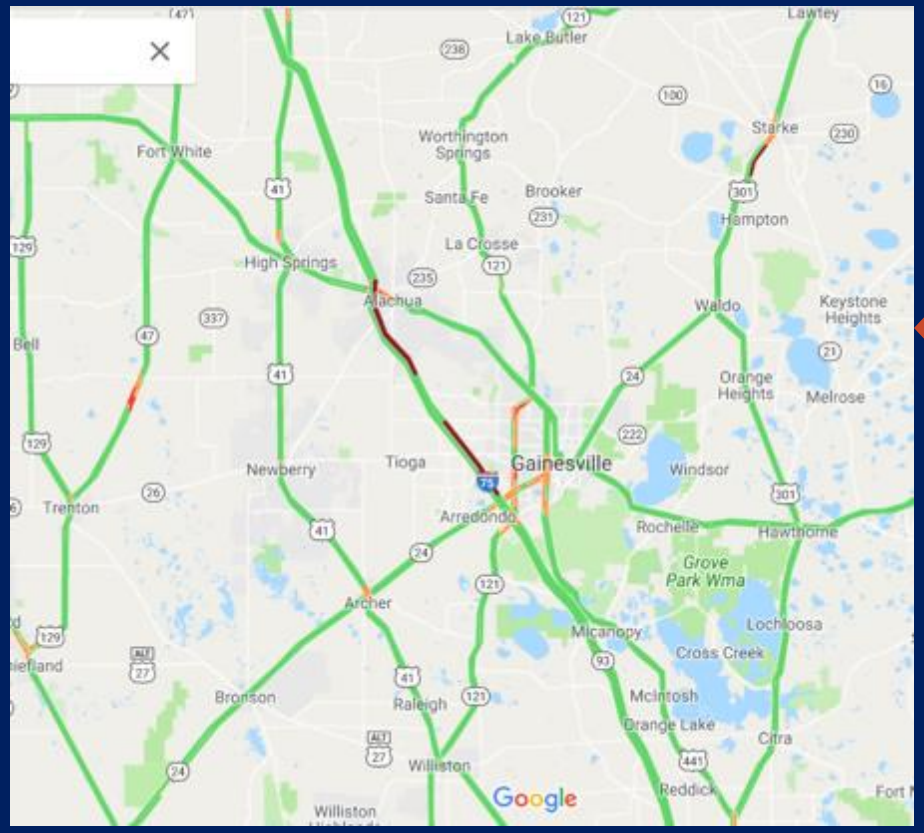


Focus on public data

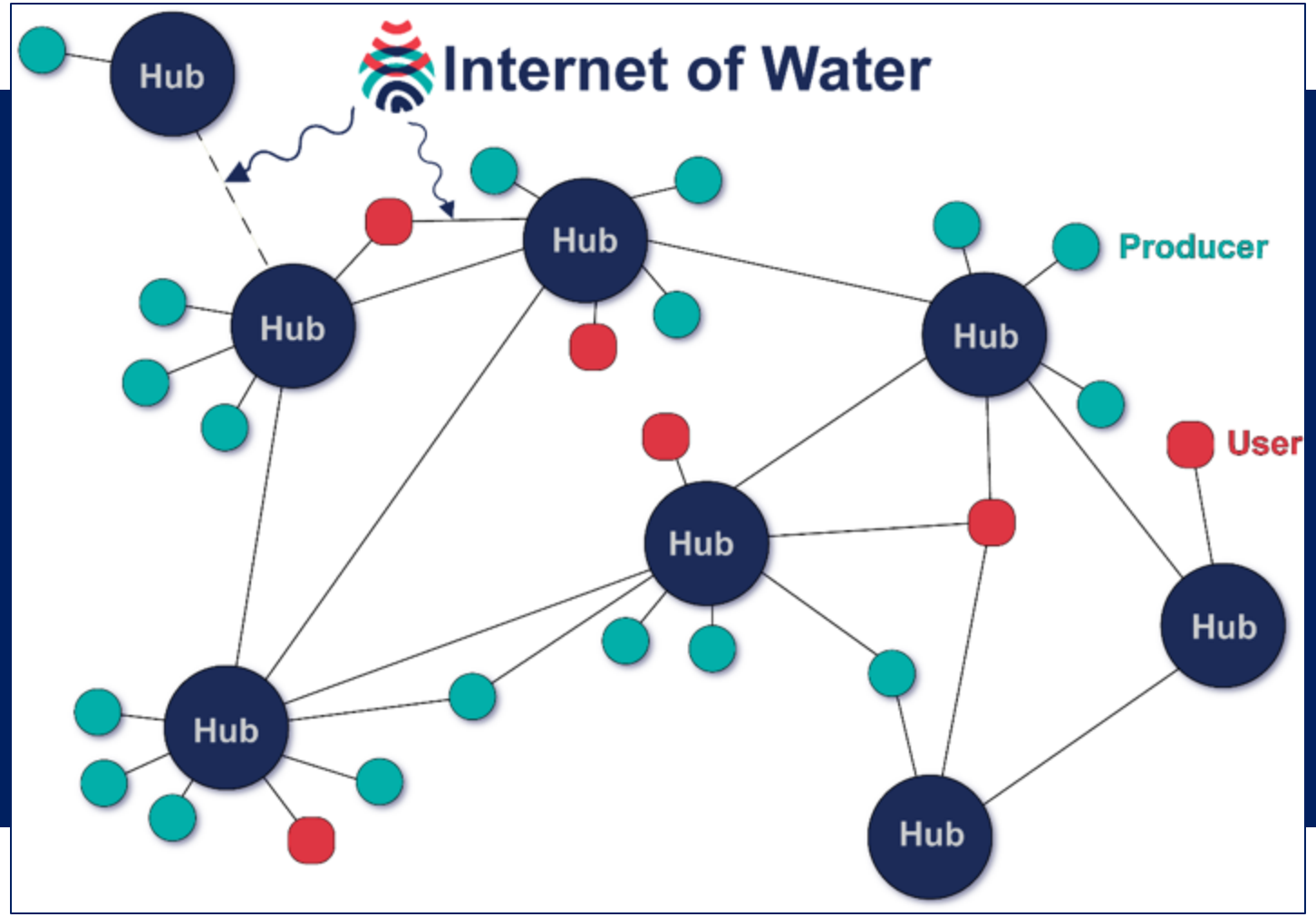
We couldn’t do this…



Until we had this.

Create an Internet of Water

- Connecting
- Opening
- Discovering
- Empowering



Vision

The Internet of Water (IoW) envisions a world engaged in sustainable water resources management and stewardship enabled by open, shared, and integrated water data and information.

Mission

The IoW is building a dynamic and voluntary network of communities and institutions that open and share water data. The network will connect data producers, hubs, and users to make water data more findable, accessible, interoperable, and re-usable (FAIR).

Strategic Goals

Develop common resources for water data hubs and build capacity for open water data

Establish IoW technical framework & common tools

Demonstrate value of open water data through pilot projects

Communicate across sectors and geographies

Develop the IoW organization

IoW Start-Up Team

- Peter Colohan, Executive Director
- Kyle Onda, Data Architect
- Ashley Ward, Engagement and Outreach Associate
- Lauren Patterson, Data Analyst
- Kristen Downs, Policy Associate
- Jeremy Diner, Community Science Consultant

IoW Board

- Jared Bales, CUAHSI
- Kelly Bennett, B3
- Al Cho, Xylem
- Peter Colohan, IoW
- Martin Doyle, Duke University
- Greg Gearheart, CA Water Resources Control Board
- Sam Hermitte, TX Water Development Board
- Sara Larsen, Western States Water Council
- Emily Read, USGS
- Dwane Young, EPA

Partner Organizations

Duke NICHOLAS INSTITUTE FOR ENVIRONMENTAL POLICY SOLUTIONS

THE ASPEN INSTITUTE ENERGY & ENVIRONMENT PROGRAM

S. D. BECHTEL, JR. FOUNDATION STEPHEN BECHTEL FUND

THE CYNTHIA & GEORGE MITCHELL FOUNDATION

PISCES FOUNDATION

GORDON AND BETTY MOORE FOUNDATION

WALTON FAMILY FOUNDATION

KINGFISHER FOUNDATION

Water Funder Initiative

1965 - 2015 WESTERN STATES WATER COUNCIL

CUAHSI universities allied for water research

Water Data Collaborative

Trust

Common Tools

Water data glossary

Federated metadata catalogue of water data, to include stream gauge data, volunteer monitoring data

Catalogue of standards for water data, metadata, and advanced sensors

Common Resources

Strategies and best practices for long-term O & M of cloud services

Tutorials and handbooks for building water metadata & water data catalogues

Conceptual approaches to building common data models

Strategies for common cataloguing, connectivity, & interoperability across IoW

Pilot Process

Recommendation: Initiate an Internet of Water through regional pilots that solve near-term water management problems for key stakeholders through shared and integrated water data.

Pilot Process

1. Design Phase
2. Data Phase
3. Demonstration Phase

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