WHY WATER?

- Increasing Demand
- Cost Disparity
- Inaccessible Data
- Growing Scarcity
- Online Water Cost Database
WATER PRICE FRAMEWORKS

- INTERNATIONAL ASSOCIATIONS
  - IWA
  - IBNET

- PRIVATE CORPORATIONS
  - PROPRIETARY TOOLS

- ACADEMIA
  - ARTICLES
  - REPORTS

- LOCAL COMMUNITIES
  - LOCAL KNOWLEDGE
  - POLITICAL CAMPAIGNS
1. **Analysis**

2. **Database Design**

3. **Prototype Implementation**
ANALYSIS: EXISTING DATA

Research conducted by an undergraduate research assistant on mining and agricultural water costs in the Atacama Desert.
ANALYSIS: CONSULTATIONS

Google Jamboard sessions with subject matter experts on research team.
ANALYSIS: FINDINGS

Cost types
- Transactional price
- Regulatory price
- Environmental value
- Derived value

Data attributes
- Price
- Value
- Unit of measurement
- Water use sector
- Currency
- Date

Wiki interface
-Queryable database
-Sortable tables
-Downloadable reports
-Interactive visualizations
ISSUE

Complex information

Evolving landscape

Desire to support access

DESIGN PRINCIPLE

Relational database

Hospitable to new data & data types

Intuitive structure & metadata
• Data consistency and validity
• Many-to-many relationships
• Overlapping jurisdictions
• Communities
• Non-humans
PROTOTYPE 1: DATA COLLECTION

Airtable [left] and Miniextensions [right] used to develop first prototype.
SQL used to develop second prototype.
NEXT STEPS

- Data collection
- Data validation
- Visualizations
- User contributions
- Contextual information
- Other commons
- Web development